

FIVE-YEAR REVIEW REPORT

Second Five-Year Review Report For Electro-Voice Superfund Site Buchanan, Michigan

September 2006

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List of Acronyms

AOC Administrative Order on Consent

ARARs Applicable or Relevant and Appropriate Requirements

CD Consent Decree

CERCLA Comprehensive Environmental Response, Compensation, and Liability Act CERCLIS Comprehensive Environmental Response, Compensation, and Liability

Information System

CFR Code of Federal Regulations
COC Contaminant of Concern

EPA United States Environmental Protection Agency

ESD Explanation of Significant Differences

EV Electro-Voice Site

GEOS Groundwater Evaluation and Optimization System

GSI Groundwater to Surface Water Interface

HRS Hazard Ranking System ICs Institutional Controls

ICTS Institutional Controls Tracking System

MCLs Maximum Contaminant Levels

MDEQ Michigan Department of Environmental Quality MDNR Michigan Department of Natural Resources

MEK Methyl Ethyl Ketone

MNA Monitoring Natural Attenuation

NA Natural Attenuation

NCP National Oil and Hazardous Substances Contingency Plan

NPL National Priorities List

NREPA Natural Resources and Environmental Protection Act

O&M Operation and Maintenance

OU Operable Unit

PRP Potentially Responsible Party

RA Remedial Action

RAO Remedial Action Objective

RD Remedial Design

RI/FS Remedial Investigation/Feasibility Study

ROD Record of Decision

RPM Remedial Project Manager

SDMS Superfund Data Management System

SOW Statement of Work

SVVS Subsurface Volatilization and Ventilation System

TCE Trichloroethylene

UU/UE Unlimited use or unrestricted use

VC Vinyl Chloride

VOCs Volatile Organic Compounds

WasteLAN The Regional database related to CERCLIS

WOBELs Water Quality Based Effluent Limits

Executive Summary

The Electro-Voice Superfund Site (EV Site) consists of two operable units (OUs). OU1 is the EV property (source area) located at 600 Cecil Street, Buchanan, MI and OU2 includes off-property (downgradient) groundwater contamination. The OU1 Record of Decision (ROD) was signed in 1992 and subsequently modified by Explanations of Significant Differences (ESDs) issued in 1993, 1995 and 1996. The selected remedy for OU1 was implemented from 1993 through 1997. It included capping the lagoon area, treating contaminated soil with subsurface volatilization and ventilation system (SVVS) technology and implementing institutional controls (ICs). The selected remedy for OU2 is monitored natural attenuation (MNA) for groundwater with ICs. In 1999, the United States Environmental Protection Agency (EPA) signed the OU2 ROD and in March 2005 EPA approved the Natural Attenuation Monitoring Plan (dated February 7, 2005). Mark IV Industries, Inc. (Mark IV), Electro-Voice, Inc.'s former parent corporation, is conducting the operation and maintenance (O&M) of the remedy.

The groundwater monitoring for both on- and off-property has been conducted on a quarterly basis at the EV Site since 1993. The sampling frequency was reduced to a semi-annual basis with the implementation of the Natural Attenuation Monitoring Plan in March 2005. The City of Buchanan has a groundwater use ordinance that restricts the use of groundwater in areas designated as contaminated by the State and/or EPA. All residents within the city are connected to the city's water system, which addresses the drinking water exposure pathway for the contaminants.

The trigger action for this Five-Year Review was the completion date for the first Five-Year Review on September 28, 2001.

The remedy for the on-property source control areas (OU1) is currently protective of human health and the environment because the landfill cap is in good condition and the existing industrial use of the property is consistent with the land use restrictions (prohibiting interference with the cap and limiting use of the property to industrial use). The groundwater control remedy (OU2) is protective of human health in the short term because the city water wells are upgradient of the contaminant plume and the area within the groundwater contaminant plume is under a groundwater use restriction.

Long-term protectiveness requires compliance with land use restrictions on the EV property that prohibit interference with: the hazardous waste cap, soil in the limited industrial land use area and building foundations. Long-term protectiveness will be ensured by maintaining and monitoring effective institutional controls (ICs). The groundwater remedy will achieve long-term protectiveness when the groundwater cleanup standards are achieved throughout the plume area. Follow up actions also need to be taken to ascertain whether or not the groundwater in the northeast plume area (containing metals and VOCs) discharges into the creek at levels exceeding the Michigan criteria.

Five-Year Review Summary Form

	SIT	E IDENTIFICATION				
Site name (from WasteLAN): Electro-Voice						
EPA ID (from V	VasteLAN): MIC	0 005068143				
Region: 5	Region: 5 State: MI City/County: Buchanan/Berrien					
		SITE STATUS				
NPL status:	Final Delete	ed □ Other (specify)				
Remediation st Operating		I that apply): □ Under Construction				
Multiple Operal	ble Units	Construction completion date: 09/21/1999				
● YES □ NO		en e				
Has site been p	out into reuse?	■ YES □ NO				
	F	REVIEW STATUS				
Lead agency:	■ EPA □ State ■ State	☐ Tribe ☐ Other Federal Agency				
Author name: (Giang-Van Nguy	en				
Author title: Re Project Manage	Author title: Remedial Author affiliation: U.S. EPA, Region 5 Project Manager					
Review period:	January 2006	to September 2006				
Date of site ins	pection: June	14, 2006				
Type of review: Post-SARA □ Pre-SARA □ NPL-Removal only □ Non-NPL Remedial Action Site □ NPL State/Tribe-lead □ Regional Discretion 						
Review number: ☐ 1 (first)						
Triggering action: ☐ Actual RA On-site Construction at OU # ☐ Actual RA Start at OU# ☐ Construction Completion ☐ Previous Five-Year Review Report ☐ Other (specify)						
Triggering action date (from WasteLAN): September 28, 2001						
Due date (five years after triggering action date): September 28, 2006						

^{* [&}quot;OU" refers to operable unit.]

** [Review period should correspond to the actual start and end dates of the Five-Year Review in WasteLAN.]

Five-Year Review Summary Form, cont'd.

Issues:

- Since January 2000, the TCE concentrations in the northeasterly plume boundary wells, MW25 and MW37, have been increasing. Also, the most northeasterly McCoy Creek wells, MW26C and MW29C, show the level of TCE concentrations at or above the MCL. These wells previously exhibited concentrations below the MCL.
- 2. Mercury and zinc at MW26S, MW26D, MW28, MW34 and MW39, monitoring wells close to McCoy Creek, have exceeded the current GSI criteria.
- 3. Remedial activities at the nearby former Clark Equipment site (McCoy Creek Industrial Park) could significantly influence groundwater flow directions and rates for OU2 in the northeast and near McCoy Creek.
- 4. The vegetative cover on the hazardous waste cap area is under stress from lack of moisture or other causes and needs to be properly maintained.
- 5. Land use restrictions are required to prohibit interference with the hazardous waste cap, industrial use area (former dry well area) and building foundations and to prohibit groundwater use at the EV property.
- 6. Groundwater restrictions are required to prohibit groundwater use throughout the plume until cleanup standards are achieved.
- 7. Long-term protectiveness will be ensured by maintaining and monitoring effective ICs.

Recommendations and Follow-up Actions:

- 1. Evaluate northeast plume expansion:
 - a. Establish two additional sentry monitoring wells in the area downgradient of MW26C and MW29C and conduct quarterly sampling and analysis for VOCs, mercury, chromium and zinc at these new sentry monitoring wells;
 - b. Reinstate quarterly sampling (instead of the semi-annual sampling) and analysis of groundwater for VOCs at MW25 and MW37 (the wells showing increasing concentrations or MCL exceedances of TCE); confirm that there are no existing uses of groundwater in this area;
 - c. Confirm that the groundwater use restrictions are being adhered to in the northeast plume area;
 - d. Evaluate cause of plume expansion and implement the contingency plan.
- 2. Evaluate the threat to McCoy Creek due to metal concentrations:

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- a. Reinstate quarterly sampling and analysis of groundwater for mercury, zinc and chromium at MW 26S, MW26D, MW28, MW34 and MW39 (the wells showing exceedances of GSI criteria for metals);
- b. Implement the contingency plan to evaluate whether groundwater may empty into McCoy Creek at levels of metals or VOCs that would threaten the creek; and if so implement the contingency plan to address this situation.
- 3. Evaluate potential changes in groundwater flow rates and directions:

- a. Evaluate whether operations of the Dewey Street dam structure, the salmon ladder, and other in-stream features have changed or in the future could change in a manner that significantly alters groundwater flow rates and directions which could then impact the performance or the protectiveness of the remedy;
- b. Evaluate whether operation of the groundwater extraction and treatment system at the Clark Equipment site could significantly alter groundwater flow rates and directions and impact the performance or the protectiveness of the remedy;
- c. Obtain additional data on groundwater flow directions and rates in the downgradient portions of the EV plume, where concentrations of TCE have risen and where the location of the plume discharge to McCoy Creek is uncertain. Such information may be provided by the installation of new monitoring wells or the incorporation of existing monitoring wells from the adjacent Clark Equipment property within the EV monitoring network.
- 4. Maintain the vegetative cover on the cap area as needed to facilitate growth and control soil erosion.
- 5. Require the Settling Defendant to continue inspections of the EV property and include an annual certification of compliance with land use restrictions for the cap, industrial use area, building foundations and groundwater on the EV property as part of the annual report.
- 6. Require the Settling Defendant to continue evaluation of the groundwater ordinance in the annual report and to follow-up with the City to ensure the existing groundwater protection ordinance covers entire the plume area.
- 7. Ensure long-term stewardship:

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- a. Create additional IC maps which depict the areas where the use restrictions are required; and
- b. Require the Settling Defendant to explore additional mechanisms to ensure longterm protectiveness such as prepare an IC communication plan and explore the use of the state's one call system.

Protectiveness Statement:

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The remedy for the on-property source control areas (OU1) is currently protective of human health and the environment because the landfill cap is in good condition and the existing industrial use of the property is consistent with the land use restrictions (prohibiting interference with the cap and limiting use of the property to industrial use). The groundwater control remedy (OU2) is protective of human health in the short term because the city water wells are upgradient of the contaminant plume and the area within the groundwater contaminant plume is under a groundwater use restriction.

Long-term protectiveness requires compliance with land use restrictions on the EV property that prohibit interference with: the hazardous waste cap, soil in the limited industrial land use area and building foundations. Long-term protectiveness will be ensured by maintaining and monitoring effective ICs. The groundwater remedy will achieve long-term protectiveness when the groundwater cleanup standards are achieved throughout the plume area. Follow up actions also need to be taken to ascertain whether or not the groundwater in the northeast plume area (containing metals and VOCs) discharges into the creek at levels exceeding the Michigan criteria.

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Other Comments:

None

Five-Year Review Report

I. INTRODUCTION

The purpose of Five-Year Reviews is to determine whether the remedy at the Site is expected to be protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in Five-Year Review reports. In addition, Five-Year Review reports identify issues found during the review, if any, and recommendations to address them.

The Agency is preparing this Five-Year Review pursuant to CERCLA §121 and the National Contingency Plan (NCP). CERCLA §121(c) states:

If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.

The Agency interpreted this requirement further in the National Contingency Plan (NCP); 40 CFR §300.430(f)(4)(ii) states:

If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.

The United States Environmental Protection EPA (EPA) Region 5 has conducted a Five-Year Review of the remedial actions implemented at the Site. This review was conducted from January 2006 through September 2006. This report documents the results of the review.

This is the second Five-Year Review for the Site. The triggering action for this statutory review is the completion date of the first Five-Year Review, September 28, 2001, as shown in EPA's WasteLAN database. The Five-Year Review is required since hazardous substances, pollutants, or contaminants remain at the Site above levels that allow for unlimited use and unrestricted exposure.

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II. SITE CHRONOLOGY

Table 1: Chronology of Site Events

Date	Event
March 1979	MDEQ investigated the EV Site following a release of plating solution into a lagoon.
09/01/1982	EV proposed to National Priorities List (NPL).
09/21/1984	EV placed on the NPL.
10/08/1987	EV entered into an Administrative Order on Consent (AOC) with EPA to conduct a Remedial Investigation and Feasibility Study (RI/FS).
1990	EV completed the Remedial Investigation.
1991	EPA completed the Feasibility Study.
06/23/1992	EPA signed the First Operable Unit ROD for the contaminated soil in the dry well area, the lagoons and the on-property groundwater (OU1 ROD).
06/02/1993	ESD was signed to revise the list of cleanup standards for dry well area soil and on-property groundwater.
12/21/1993	Court entered Consent Decree (CD) between EPA and EV that requires EV to conduct OU1 RD/RA for dry well area soil, lagoon area and on-property groundwater.
05/04/1995	ESD was signed to select SVVS (a new cleanup technology) for dry well area soil and on-property groundwater.
05/23/1996	ESD was signed to revise the cleanup standards to incorporate changes in Michigan Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA).
1996	EV completed excavation of contaminated soil and construction of the hazardous waste landfill cap over the lagoons area soil.
09/21/1999	EPA signed the second ROD for the off-property (downgradient) groundwater contamination (OU2 ROD).
09/21/1999	Construction complete.
02/15/2001	Court entered CD between Mark IV (EV's parent corporation) and EPA that requires Mark IV conduct the remedial design/remedial action (RD/RA) to implement the monitored natural attenuation remedy for the off-property groundwater contamination.
09/28/2001	Completion of the first Five-Year Review.
08/2002	RD activities initiated for the off-property groundwater contamination.

Table 1: Chronology of Site Events

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Date	Event
09/23/2002	City of Buchanan modified its groundwater protection ordinance, Ordinance No. 355.
09/19/2003	RD for the off-property groundwater contamination was completed.
11/26/2003 RA for the dry well soil area and on-property groundwater was completed.	
03/15/2005	Long-term natural attenuation monitoring plan begins.

III. BACKGROUND

Physical Characteristic

The EV Site is located at 600 Cecil Street in the City of Buchanan, Berrien County in the southwest corner of Michigan (see Attachment 1, Site location map). Audio equipment was manufactured at the EV property from 1946 until 2002. Activities at EV included die casting, machining, assembly, painting, electroplating and administration. Research and development activities were moved to another location in 1988. The EV plant included a building, two parking lots and an open field. Currently, there are no operations at the EV facility and the building is vacant. The facility was closed in 2002 and all of the equipment removed from the interior

The EV Site consists of the EV building and parking areas, a former dry well area used for the disposal of paint wastes and solvents, a former lagoon area used for the disposal of electroplating wastewaters, a former fuel tank area, and a groundwater plume contaminated with volatile organic compounds (VOCs) that extends one-half mile north from the EV property boundary to McCoy Creek.

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Land and Resource Use

The EV Site is surrounded by residential homes, a few commercial properties and an elementary school. All residents are connected to the city water supply. The city wells are located about three-fourths of a mile west of EV Site and are either upgradient or side-gradient of the off-property groundwater contamination. The city wells are not threatened by the EV contaminant plume because they are located hydraulically upgradient from the plume (groundwater flow is to the north, see Attachment 3).

In 1952, EV constructed two clay-lined lagoons (north and south lagoon) for disposal of liquid wastes from the electroplating operation at the plant. EV discharged plating waste to the lagoons from 1952 to 1962. A dry well was installed in 1964 for disposal of wastes produced during painting operations. The dry well consisted of a pit in the ground, which was backfilled with gravel. A gravity drain pipe connected a sink inside the building to the dry well. The sink was used to clean equipment associated with the paint shop.

In 1973, a subsurface tank (20,000-gallon capacity) was installed immediately west of the original dry well to collect discharge from the paint shop. In 1975, the subsurface tank was removed and replaced with an upright buried tank of similar capacity, which was removed in 1983. An aboveground tank, with a capacity of 1,000 gallons, was placed near the dry well and was identified as the methyl ethyl ketone (MEK) tank. The MEK tank has also been removed from the Site.

Two partially buried fuel-oil tanks were excavated and removed from the Site during July 1987. These tanks had been on-site since 1930. EV used the tanks form 1946 to 1960 for storage of No. 6 fuel oil.

History of Contamination

The contamination at the Site resulted from EV's discharge of electroplating wastes into the north and south lagoons from 1952 to 1962, and from the disposal of paint wastes and solvents into a dry well from 1964 to 1973. The waste disposal activities contaminated the groundwater with VOCs. The groundwater contamination extends about one-half mile north of the EV property boundary to McCoy Creek. In 1980, EV excavated the contents of north lagoon and backfilled with fill material. The south lagoon was backfilled and graded to match the natural surface topography of the area. However, no waste materials were removed from the south lagoon before it was backfilled.

Initial Response

In July 1982, a Hazard Ranking System (HRS) score was developed for the EV Site. On September 8, 1983, the EV Site was proposed for inclusion on the National Priorities List (NPL), and the proposal became final on November 21, 1984.

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In 1987, Electro-Voice, Inc. entered into an administrative order on consent (AOC) with EPA to conduct the Remedial Investigation and Feasibility Study (RI/FS). EV completed the RI in 1990. However, in 1991, EV failed to revise its draft FS report consistent with the requirements of the National Contingency Plan (NCP). EPA completed the FS in 1991 and issued its proposed cleanup plan for the Site in September 1991.

Basis for Taking Action

A baseline risk assessment was conducted and cleanup levels were developed as part of the RI. Prior to remedy implementation, the groundwater exceeded the MCLs for vinyl chloride, benzene, ethylbenzene, toluene and trichloroethylene. The contaminated groundwater plume from the EV Site extends for a half mile under residential and city property before it discharges into McCoy Creek. McCoy Creek is designated as a protected trout stream by the Michigan Department of Natural Resources (MDNR) and is stocked with brown trout at locations upstream from Buchanan. Metals have also been detected in groundwater at some locations downgradient from EV property. The risk assessment indicated that there would be unacceptable cancer and non-cancer risks for potential future exposure from residential use of groundwater, recreational use of McCoy Creek, and exposure to groundwater vapors in nearby property basements.

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The principal contaminants of concern (COCs) at the EV Site include trichloroethene (TCE), vinyl chloride (VC) and several metals.

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IV. REMEDIAL ACTIONS

Remedial activities are being conducted by Mark IV (Electro-Voice, Inc.'s former parent corporation) at the EV Site, under the oversight of EPA and the Michigan Department of Environmental Quality (MDEQ).

Remedy Selection

The ROD for OU1 (source control remedy) was signed on June 1992 and modified by the 1993, 1995, and 1996 ESDs. The OU1 ROD, as modified, includes:

- Deed restriction to prohibit excavation in the lagoon area and dry well area and to prohibit groundwater use;
- Subsurface volatilization and ventilation system (SVVS) treatment of soil to limited industrial land use cleanup criteria under Part 201 of the Michigan Natural Resources and Environmental Protection Act (NREPA); and
- Construction of a hazardous waste landfill cap over the lagoon area soil.

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The ROD for OU2 (off-property groundwater) was signed on September 1999 and includes:

- Natural attenuation to restore the off-property groundwater to MCLs and state groundwater generic residential drinking water criteria for TCE and vinyl chloride;
- A city ordinance to limit groundwater use until the aquifer is restored to cleanup levels;
- Groundwater monitoring to track the progress of natural attenuation over time, which will ensure that the remedy remains protective of human health and the environment until the cleanup levels are attained, and ensure that metal concentrations will not negatively impact McCoy Creek (since groundwater discharges into the creek); and
- Implementation of contingency actions if the monitoring indicates that natural attenuation is not successful in achieving the cleanup standards and/or unacceptable levels of contaminants discharge into the creek.

Contingency Plan

The 2005 Natural Attenuation Monitoring Plan identifies the following sample criteria that would require the implementation of a contingency plan for the EV Site:

1. Existing concentrations of a contaminant of concern increase to above applicable State of Michigan GSI mixing zone criteria in wells near McCoy Creek;

2. Existing concentrations of a contaminant of concern increase greater than 25% over the December 2003 VOC concentrations or September 2002 metals concentrations in a monitoring well that is used to define the plume boundary;

Barrier & March 1984 Barrier

- 3. Existing concentrations of contaminant of concern increase greater than 100% over the December 2003 VOC concentrations or September 2002 metals concentrations in a monitoring well that is not a boundary monitoring well; or
- 4. A contaminant of concern appears at a concentration greater than the applicable State of Michigan residential drinking water criteria or GSI mixing zone criteria in a monitoring well that previously did not contain concentrations above the method detection limit.

The ROD and the Natural Attenuation Monitoring Plan identify possible contingency actions.

Remedy Implementation

Remedy Implementation for OU1

EPA issued the ROD for OU1 on June 23, 1992. On December 21, 1993, in <u>United States v. Electro-Voice, Inc.</u>, Civil Action No. 1:93-CV-753 (W.D.Mich.S.Div.), the Court entered a Consent Decree between Electro-Voice, Inc. and the United States whereby EV agreed to conduct the RD/RA for the OU1 at the EV Site. The CD and its attached statement of work (SOW) divided the RD/RA work into two phases. Phase I addressed the former lagoon area soil, lower aquifer investigation, and off-property groundwater monitoring; and phase II addressed the dry well area soil and on-property groundwater.

The lower aquifer investigation and design for the lagoon soil remediation were completed in 1995. Excavation of the contaminated soil and construction of the hazardous waste landfill cap over the lagoon area soil were completed in 1996. A total of 24,500 cubic yards of contaminated soil was removed from the area of excavation and placed in the area of the planned cap. The excavated areas were backfilled with clean soil from off-site borrow pits. The cap construction consists of three feet of clay covered by a two foot layer of sand and four inches of top soil. The OU1 Phase I RA report was submitted to EPA in December 1996, and EPA approved the report in March 1997.

In 1993, 1995, and 1996, EPA revised the OU1 remedies through ESDs. The ESDs revised the list of cleanup standards for dry well area soil and on-property groundwater; selected a different cleanup technology, subsurface volatilization and ventilation system (SVVS) to treat dry well area soil and on-property groundwater instead of soil vapor extraction and groundwater pump-and-treat; and revised the cleanup standards to incorporate changes in Michigan Act 451 Part 201.

The additional studies and design for the lagoon soil remediation were completed in October 1995. Excavation of the contaminated soil and construction of the clay cap began in May 1996. Construction was completed in September 1996.

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The VOCs in the dry well area and on-property groundwater were treated to industrial cleanup levels by the subsurface volatilization and ventilation system (SVVS) technology, similar to air-sparging with soil vapor extraction. The SVVS began on March 26, 1993 and was shut down in 1997.

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In August 1996, EPA approved EV Phase II Remedial Action Work Plan for the dry well area soil and on-property groundwater. This Work Plan provided a schedule for closure verification of the dry well area soil and on-property groundwater, including plans for verifying attainment of the May 23, 1996 ESD cleanup standards in the dry well area soil and the on-property groundwater. In October 1996, EV conducted verification sampling to evaluate whether the initial and final cleanup standards for the dry well area were achieved. EV summarized the results of the verification sampling and data evaluation in its May 1997 Dry Well Area Soil Evaluation Report. On June 12, 1997, EV submitted a letter describing its calculation of cumulative cancer risk and hazard index for the dry well area soil. EV's conclusion was that the cleanup standards had been attained and that the system could be shut down. The final Phase II RA report for the dry well area soil and on-property groundwater was approved by EPA in November 2003. The Phase II RA report showed that the life time cancer risk (1×10^{-5}) based on industrial use and the lifetime hazard index calculation (less than 1) results are within the acceptable range established in the National Contingency Plan (NCP). The verification sampling for dry well area soil and on-property groundwater indicated none exceed Part 201 direct contact industrial criteria. The Phase II RA report also stated that the dry well area soil was not adversely impacting groundwater in the area based on its on-property groundwater analytical data. The report concluded that no further active remediation is required for the dry well area soil based on its risk calculations and verification data.

In 1993, EV recorded a Declaration of Restrictions whereby EV agreed to prohibit excavation in the lagoon area and dry well area unless approved by EPA. During 2005 and 2006, EPA worked with Mark IV and the current owner, Telex Communications, Inc. (Telex), to develop a restrictive covenant that reflected current conditions and use restrictions at the Site as part of an institutional control plan for the Site. Mark IV conducted a survey of the hazardous waste landfill cap and limited industrial use areas. Telex obtained an up to date title commitment on the property. On September 12, 2006, Telex recorded the restrictive covenant set forth in Appendix 4, which implements the following restrictions at the EV Site: a) prohibits interference with the hazardous waste cap over the lagoon area, the limited industrial use area (former dry well area) and the foundations of the existing buildings on the property; b) prohibits residential use; c) prohibits groundwater use; and d) prohibits interference with groundwater monitoring wells. The restrictive covenant "runs with the land" and is enforceable by the following entities: Mark IV, the State of Michigan pursuant to Section 201 of NREPA and EPA as a third party beneficiary:

The on- and off-property groundwater has been monitored quarterly since 1993. The wells related to the on-property groundwater were sampled initially in 1988 during the RI. Based on the data from the on-property groundwater monitoring wells, the contaminants historically have shown a decrease over time, indicating that the remedial measures performed on the soil have had a positive effect on the groundwater. The quarterly sampling of the on-property monitoring

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wells were ceased in December 2003. As part of the OU2 monitoring plan, on-property groundwater continues to be monitored on a quarterly basis (utilizing MW9s and MW9d).

Remedy Implementation for OU2

EPA's selection of a remedy for OU2 was deferred until after the signing of the OU1 ROD to allow time for remedial activities on the EV property to be completed and to collect and analyze off-property quarterly groundwater samples over an extended period of time.

An off-property groundwater monitoring program began in January 1993 in accordance with the June 1992 OU1 ROD. Groundwater samples for VOC analysis have been collected quarterly since January 1993.

In 1993 and 1994, Electro-Voice, Inc. requested groundwater use restrictions from all property owners within the area of the plume. EV obtained deed restrictions prohibiting installation of drinking water wells for about one-half of the properties within the area of groundwater contamination. The OU2 ROD determined that additional deed restrictions were not necessary because in 1996 the city had adopted an ordinance (codified at Article 14, Sections 38-90 through 38-93 of the City Code) that prohibited residents from using the contaminated groundwater as a drinking water supply.

On September 23, 2002, the city deleted Sections 38-90 through 38-93 of the ordinance and adopted similar provisions via Ordinance No. 355, which is codified at Article IV, Section 38-90 through 38-98. Specifically, Section 38-93 prohibits any person from installing a well, using any existing well or pump or otherwise using any groundwater which has been designated as contaminated by a state or federal regulatory agency unless the activity has been approved as part of a remediation plan. The ordinance is presented in Appendix 5. On September 11, 2006, EPA sent a letter to the City of Buchanan that requested the City to update the EV groundwater restricted area (Appendix 6). The updated EV groundwater restricted area reflects the expanded groundwater plume area and a buffer zone.

In 1999, Electro-Voice, Inc. completed an additional off-property groundwater investigation. On February 15, 2001, the District Court entered a CD between EPA and Mark IV (EV's former parent company) in Civil Action No: 00CV918 whereby Mark IV agreed to conduct the RD/RA for OU2 at the EV Site to implement the monitoring natural attenuation remedy for the off-property groundwater contamination. The RD work plan was approved by EPA in July 2002. RD activities started in August 2002, including installing three new monitoring wells and a fence in a low area northwest of the cap, sampling the new monitoring wells and staff gages, and preparing the RD Technical Memorandum to present the results of the RD studies. EPA approved the RD Technical Memorandum on September 19, 2003.

Electro-Voice, Inc. and/or Mark IV have conducted groundwater monitoring for VOCs in onand off-property groundwater since 1993 on a quarterly basis. The sampling frequency was reduced to a semi-annual basis with the implementation of a Natural Attenuation (NA) Monitoring Plan, dated February 2005. The NA Monitoring Plan was approved by EPA on March 15, 2005.

Institutional Controls (ICs)

EPA requires that ICs be placed on a site where the implementation of an engineered remedy does not allow for unlimited use or unrestricted exposure (UU/UE). The ICs are required to assure the long-term protectiveness for the site and to maintain the integrity of the remedy. The ICs are non-engineered instruments, such as administrative and legal controls which protect the integrity of the remedy, minimize the potential to exposure to contamination, and control the future use of the property. The ICs (deed restriction) requirement was placed in the RODs were explained previously in the report. Attachment 7 and Appendix 3 show the areas where ICs are required.

In 2005-2006. EPA conducted an IC study and reviewed the title commitment. Based on the study, the follow-up actions were required. These included the update of the City groundwater use ordinance, the implementation of the restrictive covenant on EV property, and the update of the title commitments. On September 11, 2006, EPA sent a letter to the City of Buchanan that requested the City to update the EV groundwater restricted area (Appendix 7). On September 12, 2006, the current owner recorded the restrictive covenant "run with the land" (Appendix 4). And, on August 30, 2006, Mark IV completed the survey of the hazardous waste landfill cap and limited industrial use areas (Appendix 3), and obtained an up to date title commitment on the property (Appendix 2).

EPA has requested that the Settling Defendant include an annual certification of compliance with land use restrictions for the cap, industrial use area, building foundations and groundwater on the EV property as part of the annual report. We also has requested the Settling Defendant to continue evaluation of the groundwater ordinance in the annual report and to follow-up with the City to ensure the existing groundwater protection ordinance covers entire the plume area.

EPA is going to create the additional IC maps which depict the details of the areas where the use restrictions are required. The IC maps, once completed, will be publicly available and on EPA's Superfund Data Management System (SDMS). These maps will serve as an additional IC as an informational control.

As a result of this review, data will be entered into the Institutional Controls Tracking System (ICTS).

Monitoring Results

Groundwater Flow

Water levels have historically been measured in monitoring wells at the EV Site on a quarterly basis. Groundwater elevations have not had much variability overtime. Groundwater elevation maps consistently show declining groundwater levels and increasing hydraulic gradients from

near the source area (hydraulic gradient ~ 0.003 to 0.004) to the north until they converge near McCoy Creek (hydraulic gradient ~ 0.009 to 0.035).

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Hydraulic gradients in the vicinity of MW25 and MW37 are generally consistent through time. However, there are small changes between averaged recent data and data from 1998. The significance of these small changes is difficult to evaluate without additional groundwater level data in this area. The Dewey Street dam on McCoy Creek may significantly control groundwater flow directions in this area, and any changes in that structure could influence groundwater flow directions and rates. As part of remedial activities at the former Clark Equipment site (McCoy Creek Industrial Park), work was undertaken in McCoy Creek during 2005 to remove a concrete flume and construct a salmon ladder; these changes could also influence groundwater flow directions and rates in the vicinity of McCoy Creek. There is a groundwater extraction and treatment system at the Clark Equipment site that has been in operation since summer 2005, extracting a total of up to 50 gallons per minute. During early operations, treated groundwater was re-injected to the aquifer. However, in 2006, permits were requested and obtained to discharge the treated water to McCoy Creek. This extraction system could also influence groundwater flow directions and rates for OU2.

VOCs

Monitoring data indicates that TCE concentrations at MW25 and MW37 have increased over the past several years in the northeast area of the plume. The concentration of TCE at MW25 has risen from 3 micrograms per liter ($\mu g/L$) in January 1993 to 15 $\mu g/L$ in September 2004, to the current concentration of 12 $\mu g/L$ in October 2005. In 2001, TCE was detected above the MCL (5 $\mu g/L$) at MW25 (8.3 $\mu g/L$ and 10 $\mu g/L$). In 2003, the TCE concentration was 13 $\mu g/L$. The TCE concentration at MW37 has risen since 2001, In September 2001, TCE was detected in MW37 at a concentration of 3.6 $\mu g/L$. In December 2003, the TCE concentration was 12 $\mu g/L$. In November 2004, TCE was detected at 8.8 $\mu g/L$. In October 2005, the TCE concentration was 9 $\mu g/L$.

The northeast area of the EV plume is under the former Clark Equipment Site (McCoy Creek Industrial Park). Monitoring wells and piezometers have been installed by others in this area to monitor groundwater related to the former Clark Equipment Site. MW26C and MW29C (Clark Equipment monitoring wells) were incorporated into the EV MNA monitoring network and were used to monitor the northeast boundary of the EV plume. The concentration of TCE was below the 5ug/L MCL at MW26C and MW29C in April 2005, but increased above the MCLs for the first time in October 2005.

Metals

Metal concentrations have been measured at the EV Site in 1998, 2002, 2004 and 2005. There are 14 wells sampled for zinc (8 McCoy Creek wells, 2 background wells, and 4 plume wells including MW18s and MW18d) and 9 of these wells are also sampled for mercury and cadmium (8 McCoy Creek wells, and one background well). Zinc and mercury were reported at concentrations above MDEQ GSI criteria (1,100 µg/L and 0.0013 µg/L respectively) for

groundwater during 2004 and 2005 monitoring events at MW 18s, MW20, MW26S, MW28, MW26D, MW33, MW34 and MW39.

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In 2004, zinc was detected at MW18d (5,660 μ g/L) and MW18s (3,220 μ g/L). Mercury was detected at MW39 on the north side of McCoy Creek at a concentration of 1.5 μ g/L.

In April 2005, zinc was detected at MW18d (2,690 μ g/L) and MW 34 (4,270 μ g/L). MW18d is located south (upgradient) of McCoy Creek. MW34 is located west of McCoy Creek on the opposite side of the EV property.

In April 2005, mercury was detected in MW13 (0.0015 μ g/L), MW26d (0.00133 μ g/L), MW26s (0.00141 μ g/L), MW28 (0.00159 μ g/L) and MW39 (0.00249 μ g/L). MW26d, MW26s, and MW28 are upgradient and close to McCoy Creek.

In October 2005, zinc was detected in MW20 (2,360 μ g/L). MW20 is located south (upgradient) of McCoy Creek.

Cadmium was not detected above the reporting limits in 2004 and 2005.

Operations and Maintenance

The EV Site remedy's two major components, the lagoon area soil cap cover and groundwater monitored natural attenuation (MNA) are covered by the Operation and Maintenance (O&M) Plan and Natural Attenuation (NA) Monitoring Plan, respectively.

Lagoon Area Soil Cap Cover

O&M activities for the lagoon area soil cap cover were conducted in accordance with the September 1995 Operation & Maintenance Plan for Lagoon Area Soil Cap. The purpose of the lagoon area soil cap is to prevent contact with, and minimize surface water infiltration into, the waste. The cap cover has no operational requirements, but requires inspection twice a year and maintenance to ensure that it serves its intended purpose and is in accordance with the approved O&M plan. There are no major problems to date with regard to implementation of O&M for the lagoon cap cover.

Groundwater Natural Attenuation Monitoring

NA Monitoring was conducted in accordance with the February 2005 NA Monitoring Plan for off-property groundwater (approved by EPA on March 15, 2005). The NA Monitoring does not have operational requirements, but requires sampling on a semi-annual basis to verify that the natural attenuation continues to reduce Site-related contaminants in groundwater. The semi-annual sampling is conducted in April and October at the EV Site. Groundwater samples were collected from a total of 30 monitoring wells currently installed at the Site. All of the groundwater samples collected were analyzed for VOCs and dissolved gases (methane, ethane, and ethane). Groundwater samples from select locations were also analyzed for cadmium, mercury and zinc in accordance with the NA Monitoring Plan.

Under the NA Monitoring Plan, Mark IV is required to submit an annual report to EPA that must include (in addition to other items): a) identification of the restricted area in the city ordinance; b) discussion of whether the boundaries of the restricted area are sufficient to prevent exposure to off-property groundwater contamination; c) location of any new wells located in and around the study area, including wells located outside the Buchanan city limits that may be impacted by the plume; and d) contingency actions.

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Annual System Operations/O&M Cost

Dates	e e	Total Cost	
2001		\$96,000	
2002		\$192,350	
2003		\$176,150	
2004	The second secon	\$173,900	
2005		\$106,200	

V. PROGRESS SINCE THE LAST REVIEW

The first Five-Year Review was prepared by EPA in September 2001. The review concluded that the remedy selected for OU1 was protective of human health and the environment and that the OU2 had not been fully implemented, though the remedy was expected to be protective of human health and the environment once completed.

The recommendation from the previous review and key follow-up actions are summarized in the table below

Actions Taken Since the Last Five-Year Review

Recommendation from Previous Review	Party Responsible	Action Taken
Continue maintenance and inspection of the cap cover in accordance with the ROD and CD.	PRP	O & M plan was followed over the past five years.
Evaluate the need for any	PRP	Evaluation was completed in
future operation of the SVVS		2002 and concluded there was
system.	19 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	no need for future operations
		of SVVS system.
Continue groundwater	PRP	Sampling and monitoring
monitoring until MNA Plan		were conducted on a quarterly
is implemented.	Francisco Et	basis until MNA Plan was
		implemented on March 2005.

VI. FIVE-YEAR REVIEW PROCESS

Administrative Components

The EPA Remedial Project Manager (RPM), Giang-Van Nguyen, notified MDEQ and the PRP of the initiation of the Five-Year Review process in December of 2005. This Five-Year Review report was written and completed by EPA based upon information and data provided by Fishbeck, Thompson, Carr & Huber, the PRP's consultant. The data has been collected pursuant to the EPA-approved O&M Plan. Both MDEQ and EPA staff provided technical input for this review. The second second

The components of the Five-Year Review include the following:

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- community involvement;
- document review;
- data review;
- site inspection;
- local interviews; and
- Five-Year Review report development and review.

Community Involvement

A notice was published on March 16, 2006 in the Berrien County Record newspaper, Buchanan, Michigan, stating that the Five-Year Review was being conducted. No comments from the community were received by the MDEQ or EPA. Same of the strategic state

A notice will be sent to the same local newspaper to announce that the Five-Year Review report for the EV Site was completed and that the results of the review and this Five-Year Review Report will be placed in the Site repository located at the following locations: Same and the second second

- Buchanan Public Library, 117 West Front Street, Buchanan, Michigan
- EPA Region 5 Superfund Records Center
- Online at http://www.epa.gov/region5/superfund/fiveyear/fyr index.html

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A copy of the published notice can be found in Appendix 1.

Document Review

The Five-Year Review consisted of a review of:

- 1. Record of Decision Summary for Electro-Voice Site, Source Control Operable Unit (06/23/1992);
- 2. Record of Decision for Electro-Voice Site, Operable Unit 2 Off-Property Groundwater Contamination (09/21/1999);

- 3. Explanation of Differences (02/1993, 04/1995, and 05/1996);
- 4. Operation & Maintenance Plan for Lagoon Area Soil Cap for Electro-Voice, Inc. (September 1995);
- 5. Dry Well Area Soil and On-Property Groundwater Remedial Action Report Phase II, First Operable Unit for Electro-Voice Site (November 2003);
- 6. Natural Attenuation Monitoring Plan for Off-Property Groundwater Contamination, Second Operable Unit for Electro-Voice Site (February 2005);
- 7. 2004 and 2005 Annual Groundwater Monitoring Report for Off-Property Groundwater Contamination, Second Operable Unit for Electro-Voice Site; and
- 8. City of Buchanan Groundwater Protection Ordinance Chapter 38, Article IV, Sections 38-90 to 38-93) prohibiting the installation of drinking water wells in areas designated by state or federal agencies as contaminated.

Data Review

Routine groundwater monitoring for both on- and off-property groundwater has been conducted on a quarterly basis at the EV Site since 1993. The sampling frequency was reduced to a semi-annual basis with the implementation of the NA Monitoring Plan (dated February 2005) and approved by EPA on March 15, 2005. The semi-annual sampling is conducted in April and October at the EV Site.

The evaluation of the natural attenuation processes at the EV Site is achieved through implementation of the Natural Attenuation Monitoring Plan. The objectives are:

- Monitor changes in the chemical composition and concentrations of groundwater contaminants and their potential degradation products;
- Confirm that contaminant concentrations are continuing to decrease at rates that will attain cleanup standards in approximately 50 to 70 years;
- Document that off-property groundwater contaminants are fully discharging to McCoy Creek and that the extent of the off-property groundwater contamination is not expanding;
- Confirm that the levels of VOCs, cadmium, mercury, and zinc remain below Michigan GSI criteria and/or calculated site specific final chronic GSI values in monitoring wells near McCoy Creek; and
- Collect data to monitor risks to potential human and ecological receptors and to determine the need for implementing a contingency action.

Groundwater samples were collected from 30 monitoring wells installed at the Site and compared to the criteria in the following tables:

1999 ROD Cleanup Standards for Off-Property Groundwater

Chemical	Cleanup Standard (ppb)
Trichloroethene (TCE)	5
Vinyl Chloride	2

MDEQ Groundwater Mixing Zone Determination for McCoy Creek

Parameter	Chronic WQBEL (µg/L)	Acute WQBEL (µg/L)
Cadmium	32	48
Mercury	0.0013	-
Zinc	1,800	1,100

Note: WQBELs-water quality-based effluent limits

As part of this Five-Year Review, EPA's Groundwater Evaluation and Optimization System (GEOS) Team performed an analysis of the groundwater data.

GEOS ran three different statistical tests on the EV Site data. The statistical tests were performed for each contaminant at each individual sampling location. The following methodologies were used:

- A trend test (Sens test), which identifies statistically significant (90% confidence) upward or downward trends through time.
- A baseline test, which compares recent data to a baseline level, the 95% prediction limits, calculated from the first 8 available data points.
- A standard test, which compares the 95% upper confidence level constructed from the 4 most recent data points to contaminants of concern specific standards.

GEOS also did a trend analysis (Sens test) to evaluate the change of several key plume metrics (overall plume mass, volume, average concentration) over time.

In GEOS' analysis, there are statically significant increasing trends in TCE (since January 2000) at MW25, MW28 and MW37; the time interval represents the implementation of MNA. These wells are located upgradient of the EV Site to the north and east. There is not sufficient data to determine if levels are statistically increasing at nearby wells MW26C and MW29C. However, the October 2005 sampling round was the first time TCE concentrations were at or above the MCL. There are no significant trends in the overall plume mass or volume. There are no significant trends in the average concentration of TCE in the plume. The center of mass of the TCE plume is migrating toward the east-northeast.

The review of the TCE concentrations versus time data shows that a rise in concentrations at wells downgradient of the source began in the mid-1990s (for example, MW16, MW17), and at wells located further downgradient started in the late 1990s (for example, MW25, MW28) or later (for example, MW37). The causes of the increases in concentrations are unclear. The cause may be: the plume shifting to the northeast; and migration of a slug of highly contaminated groundwater (perhaps liberated, but not captured by the SVVS). The plume metrics of volume, mass, and average concentration do not show the declining trends during the MNA analysis period that are indicative of MNA progress. There are declining trends in TCE

concentrations at some wells that are consistent with the objectives of the MNA remedy for OU2. However, there are also wells monitoring the TCE plume that do not show the declining concentration trends that are indicative of MNA progress. The combined presence of increasing and decreasing trends may indicate that the plume is moving, that the distribution of mass is changing, and/or that the plume orientation is changing.

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The review of analytical data from 2004 and 2005 indicates that both zinc and mercury have been found in concentrations exceeding both State of Michigan Part 201 Residential Drinking Water and GSI criteria at the wells near McCoy Creek. These concentrations appear to be declining over time. However, the potential remains for both zinc and mercury to discharge into McCoy Creek at concentrations that exceed either or both of the Part 201 Residential Drinking Water and GSI criteria.

Site Inspection

EPA and MDEQ conducted a Site inspection on June 14, 2006. Personnel from Mark IV (the PRP) and Fishbeck, Thompson, Carr & Huber (the PRP's contractor) also participated in the inspection. The purpose of the inspection was to access the protectiveness of the remedies including the condition of fencing to restrict access, the integrity of the cap, and the condition of the monitoring wells.

Currently, there are no operations at the EV-Site and the building is vacant. At the time of this review, Telex (EV's successor) is the current owner and Telex is marketing the property.

The Five-Year Review site inspection checklist was used as a guideline for the Site inspection. The dry well area and the capped lagoons are located in the open field west of the manufacturing building. The field is surrounded by a fence with locked gates to prevent unauthorized access. The inspection team traversed the area adjacent to the cap as well as the property surrounding the cap. Vehicles were driven to inspect all monitoring wells.

The Site was observed to be in good condition. However, the grass in the cap area appeared dry and yellow. There were no signs of erosion along the cap area. The Site shows no signs of any vandalism or other disturbances. The access fences appeared intact and in good condition. The gates were locked and the signs were in good condition. The monitoring wells were properly secured and in good condition.

Interviews

Since 1995, there have been no major problems communicated to the regulatory agencies by the community with regards to the Site. Therefore, it was determined that no formal interviews with the community were necessary for this Five-Year Review.

VII. TECHNICAL ASSESSMENT

Question A: Is the remedy functioning as intended by the decision documents?

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a) On-Property Source Areas (OU1). Yes.

The June 1992 ROD as modified by the ESDs selected the following remedy components for the EV Site: 1) a hazardous waste cap to cover electroplating waste in the lagoon area; 2) SVVS to treat dry well soil to Michigan Part 201 limited industrial cleanup standards and to treat on-property groundwater to the cleanup standards; and 3) deed restrictions to prohibit incompatible uses on the EV property. The map in Appendix 3 identifies the remedy components and restricted areas.

<u>Hazardous waste cap</u>: The hazardous waste cap has been constructed and is intact based on the June 2006 inspection. The intent of the cap was to eliminate direct contact threats and to eliminate lagoon waste as a source of contaminants to the groundwater. Based on the June 2006 inspection, the hazardous waste cap is intact and functioning as intended.

Dry well area soil: The ROD intended that the dry well soil be protective of industrial use and to reduce this area as a source of contamination to groundwater. The ROD selected cleanup standards based on Michigan Act 451 Part 201 limited industrial land use scenario. The SVVS system treated the soil to the industrial cleanup standards. The property is currently zoned I2 heavy industrial, which is consistent with the industrial cleanup standards. The dry well area soil remedy is functioning as intended by the decision document.

On-property groundwater: The ROD, as modified by 1996 ESD, selected natural attenuation for on-property groundwater. The on-property groundwater has been monitored since 1993. Based on the data from the on-property groundwater monitoring wells, the concentrations of contaminants historically have shown a decrease over time, indicating that the remedial measures performed on the soil including SVVS, the removal of the contents of the north lagoon, the cap on the north and south lagoons and the natural attenuation process have had a positive effect on the groundwater. The on-property groundwater remedy is functioning as intended by the decision document.

Deed Restrictions: Long-term protectiveness of the hazardous waste cap and underlying waste and industrial cleanup standards requires land use restrictions to ensure the integrity and appropriate land use of these remedy components. On September 12, 2006, the current owner, Telex, recorded with the county recorder's office the restrictive covenant in Appendix 4 which implements the following restrictions: a) prohibits interference with the hazardous waste cap over the lagoon area, the limited industrial use area (former dry well area) and the foundations of the existing buildings on the property; b) prohibits residential use; c) prohibits groundwater use; and d) prohibits interference with groundwater monitoring wells. The restrictive covenant "runs with the land" and is enforceable by the following entities: Mark IV, the State of Michigan pursuant to Section 201 of NREPA and EPA as a third party beneficiary. Upon recordation of the new restrictive covenant, the remedy will be functioning as intended by the OU1 ROD.

Telex provided EPA with a title commitment and copies of the recorded encumbrances identified therein that demonstrated: a) Telex currently owns the property and has authority to execute the restrictive covenant; and b) prior in time recorded encumbrances do not appear to conflict with the land and groundwater use restrictions. The restrictive covenant is functioning as intended by the OU1 ROD.

b) Off-property - Groundwater Contamination (OU2). No.

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The September 1999 ROD selected: 1) natural attenuation to restore the off-property groundwater to maximum contaminant levels (MCLs) and Michigan Act 451 Part 201 generic residential drinking water criteria for trichloroethene (TCE) and vinyl chloride; 2) governmental controls (city ordinance) to limit groundwater use until the aquifer is restored to cleanup levels; 3) groundwater monitoring to track the progress of natural attenuation over time to ensure that the remedy remains protective of human health and the environment until the cleanup levels are attained, and to ensure that metal concentrations will not negatively impact McCoy Creek as groundwater empties into the creek; and 4) contingency actions if monitoring identifies the need for modifications in the remedy.

MNA: The MNA may not be functioning as intended by the ROD. The concentration of VOCs at some monitoring wells is not decreasing at a rate sufficient to meet the MNA objectives. There are statistically significant increases in TCE concentrations at some downgradient wells and plume boundary wells. There are TCE exceedances of the MCL at downgradient wells that previously have not had exceedances. There are no decreasing trends in the overall plume mass, volume or average concentration of TCE. All of this indicates that the groundwater VOC plume has migrated beyond established plume limits and that MNA is potentially not working as expected and will not achieve cleanup in the estimated timeframe.

The remedy anticipated venting of the groundwater to McCoy Creek. Once the VOCs enter McCoy Creek, they mix with the creek water and either volatilize or become so diluted that they are harmless. The remedy anticipated that metal concentrations would meet GSI criteria when the groundwater emptied into the creek. The concentration of mercury has exceeded GSI criteria at MW 26S, a well that is close to McCoy Creek. This information requires further investigation.

Groundwater IC: The 1999 ROD determined that deed restrictions for the groundwater plume area were not necessary because an existing city ordinance prohibited people from using the contaminated groundwater. By fax dated July 18, 2006, the City of Buchanan Public Services Director confirmed that Article IV, Section 38-90 through 38-99 of the City Code was currently in effect to restrict groundwater use. Specifically, Article IV, Section 38-93(5) states:

No person shall install a water well on, use any existing well on, or pump or otherwise use any groundwater which has been designated as contaminated by state or federal regulatory agency or any groundwater from beneath the surface of any property located in the City, which has been designated as contaminated by a state or federal regulatory agency unless such activity has been approved by the appropriate state or federal regulatory agency as part of a remediation plan.

To ensure that the groundwater ordinance restricts the entire plume area, EPA sent a letter to the City of Buchanan designating the restricted groundwater area identified in the map in Attachment 7 as contaminated within the meaning of Article IV, Section 38-93(5). The groundwater restricted area in the map includes the current plume, the anticipated area of plume

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expansion and a buffer zone. EPA will continue to work with the City of Buchanan and Mark IV on this matter to ensure that the groundwater use protection ordinance is functioning as intended.

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Under the NA Monitoring Plan, Mark IV is required to submit an annual report to EPA that must include (in addition to other items): a) identification of the restricted area in the city ordinance; b) discussion of whether the boundaries of the restricted area are sufficient to prevent exposure to off-property groundwater contamination; c) location of any new wells located in and around the study area, including wells located outside the Buchanan city limits that may be impacted by the plume; and d) contingency actions. Based on current data, EPA is not aware of any new wells installed within, or adjacent to, the restricted area. The groundwater ordinance appears to be functioning as intended.

Question B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the remedy selection still valid? Yes.

Changes in Standards and To Be Considered Criteria

There have been no changes in ARARs and no new standards or to be considered criteria affecting the protectiveness of the remedy since the last Five-Year Review report.

Changes in Exposure Pathways, Toxicity, and Other Contaminant Characteristics

a) On-Property Source Areas (OU1)

Dry Well Area Soil: In the OU1 ROD, EPA selected cleanup standards based on a limited industrial land use scenario under Part 201 of Michigan NREPA for the dry well area soil. The former dry well area has been treated to the Michigan Part 201 industrial criteria for soil and this area is designated as "industrial use" in the map in Appendix 3. The soil in the former dry well area does not meet Michigan's Part 201 residential use criteria. According to the city's zoning administrator, the property is currently zoned I2 heavy industrial, which is consistent with EPA's assumptions at the time of the ROD. The current owner has implemented a restrictive covenant that limits this area to industrial use and prohibits excavation in this former dry well area. The industrial use assumption is still valid for this area.

<u>Hazardous waste cap</u>: The remedial action objectives identified in the OU1 ROD are still valid for the cap over the lagoon area. There have been no changes in the physical condition of the EV Site that would affect the protectiveness of the remedy.

b) Off-Property groundwater (OU2)

The remedy requires restoration of off-property groundwater to MCLs and Michigan Act 451 Part 201 generic residential drinking water criteria for TCE and vinyl chloride throughout the plume within 54 to 66 years. Restoration of groundwater to these cleanup standards is still considered valid for the EV Site. The amount of time that it will take to achieve cleanup standards will be reevaluated.

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In addition, the groundwater is to meet Michigan GSI criteria as it discharges into McCoy Creek. The ROD required monitoring of chromium, copper and zinc to determine compliance with Michigan GSI criteria. Compliance with Michigan GSI criteria is currently being determined by monitoring the groundwater for cadmium, mercury and zinc. The Michigan GSI criteria is still considered to be an appropriate standard for the Site.

Question C: Has any other information come to light that could call into questions the protectiveness of the remedy? Yes.

There is no information that calls into question the short-term protectiveness of the remedy. However, long-term protectiveness issues associated with the MNA, TCE plume and metals will be evaluated after the additional monitoring wells are installed and the contingency plan is implemented.

VIII. ISSUES

Issue	Currently Affects Protectiveness (Y/N)	Affects Future Protectiveness (Y/N)	
1. Since January 2000, the TCE concentrations in the northeasterly plume boundary wells, MW25 and MW37, have been increasing. Also, the most northeasterly McCoy Creek wells, MW26C and MW29C, show the level of TCE concentrations at or above the MCL. These wells previously exhibited concentrations below the MCL.	N	Y	
2. Mercury and zinc at MW26S, MW26D, MW28, MW34 and MW39, monitoring wells close to McCoy Creek, have exceeded the current GSI criteria.	Needs further information	Y	
3. Remedial activities at the nearby former Clark Equipment site (McCoy Creek Industrial Park) could significantly influence groundwater flow directions and rates for OU2 in the northeast and near McCoy Creek.	N	Y	
4. The vegetative cover on the hazardous waste cap area is under stress from lack of moisture or other causes and needs to be properly maintained.	N	Y	
5. Land use restrictions are required to prohibit interference with the hazardous waste cap, industrial use area (former dry well area) and building foundations and to prohibit groundwater use at the EV property.	N	Y	

6. Groundwater restrictions are required to prohibit groundwater use throughout the plume until cleanup standards are achieved.	N	Y	
7. Long-term protectiveness will be ensured by maintaining and monitoring effective ICs	N	Y	

IX. RECOMMENDATIONS AND FOLLOW-UP ACTIONS

The OU1 remedy is functioning as intended. The OU2 remedy, MNA, may not be functioning as intended. The following recommendations are:

No	Issue	Recommendations/ Follow-up Actions	Party Responsible	Oversight Agency	Milestone Date	Follow-up Actions: Affects Protectiveness (Y/N)	
ĺ						Curre nt	Future
1.	TCE concentration is increasing at northeastern McCoy Creek wells and	-Establish additional monitoring wells and conduct quarterly sampling and analysis VOCs and metals for these new wells.	PRP	EPA	12/06	N	Y
	northeastern plume boundary wells.	-Reinstate quarterly sampling and analysis VOCs at the wells showing increasing concentrations or MCL	PRP	EPA	12/06	N	Y
		exceedances for TCE -Confirm that there are no existing uses of groundwater in the plume areaEvaluate cause of	PRP	EPA	12/06	N	Y
		expansion and contingency plan.	PRP	EPA	12/06	N	Y
2.	Mercury and zinc at some wells exceed the current MDEQ GSI criteria.	-Reinstate quarterly sampling and analysis of groundwater for metals at the wells showing exceedances of GSI criteria for metals;	PRP	EPA	12/06	Needs further infor- mation	Y
		-Submit evaluation of risk posed to McCoy	PRP	EPA	1/07	Needs further	Y

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		Creek and propose a				Infor-	
		contingency plan to				mation	
		address metal			}		
		exceedances.					
		The state of the s	,				
			·				
3.	Remedial	Evaluate potential	PRP	EPA	2/07	N	Y
	activities at	changes in					
	the nearby	groundwater flow				'	
	former Clark	rates and directions.		1			
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	Industrial						
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	significantly	Land to the state of the state		ļ			
	influence						
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	flow						
	directions and		,				
1	rates for OU2						
i	in the						
	northeast and						
!	near McCoy						
	Creek.						
4.	The	Maintain the	PRP	EPA	Immediate	N	Y
4.			rkr	EFA	ly	19	1
	vegetative	vegetative cover on			l ly		
	cover on the	the cap area as					
	hazardous	needed to facilitate	·				
	waste cap area	growth and control					
	is under stress	soil erosion.					
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5.	Land use	-Continue inspections	PRP	EPA	02/07	N	Y
"	restrictions	of EV facility and					_
	are required to	include an annual					
	_	certification of					
	prohibit						
	interference	compliance with use					
	with cap,	restrictions for cap,	1				
	industrial use	industrial use area,					
1	area (former	building foundations				ļ	

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	dry well area)	and groundwater in				1	
	and building	annual report.	1				
	foundations	-Update title					
	and to	commitment to	•				
	prohibit	ensure proper					
	groundwater	recordation of					
	use at the EV	restrictive covenant.					
	property until						
	cleanup						
	standards are						
	achieved.						
		A STATE OF THE STA		·			
6.	Groundwater	-Continue evaluation	PRP	EPA	02/07	N	Y
	restrictions	of groundwater					
	are required to	ordinance in annual					
	prohibit	report.]	
	groundwater	-Follow-up with City					
	use	to ensure existing				Ì	
	throughout	ordinance covers					
	the plume	entire plume area.					
	until cleanup						
	standards are						
	achieved.						
7.	Long-term	-Create additional IC	EPA	EPA	12/06	N	Y
	protectiveness	maps					
	will be	-Ensure long-term					
	ensured by	stewardship by	PRP	EPA	09/07	N	Y
	maintaining	prepare a	·				
	and	communication plan					
	monitoring	and explore the use of					
	effective ICs	the state's existing			1		
		one-call system.	* .				

X. PROTECTIVENESS STATEMENT

The remedy for the on-property source control areas (OU1) is currently protective of human health and the environment because the landfill cap is in good condition and the existing industrial use of the property is consistent with the land use restrictions (prohibiting interference with the cap and limiting use of the property to industrial use). The groundwater control remedy (OU2) is protective of human health in the short term because the city water wells are upgradient of the contaminant plume and the area within the groundwater contaminant plume is under a groundwater use restriction.

Long-term protectiveness requires compliance with land use restrictions on the EV property that prohibit interference with: the hazardous waste cap, soil in the limited industrial land use area and building foundations. Long-term protectiveness will be ensured by maintaining and

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monitoring effective ICs. The groundwater remedy will achieve long-term protectiveness when the groundwater cleanup standards are achieved throughout the plume area. Follow up actions also need to be taken to ascertain whether or not the groundwater in the northeast plume area (containing metals and VOCs) discharges into the creek at levels exceeding the Michigan criteria.

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XI. NEXT REVIEW

The next Five-Year Review for the Site is required by September 2011, five years from the date of this review.

Attachment 1 - Site Location Map



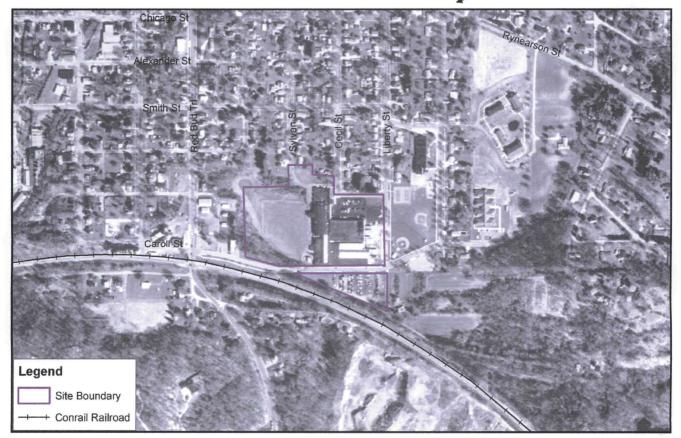
Electro-Voice Inc. Berrien County, MI



MID005068143



County



Site

Created by Sarah Backhouse U.S. EPA Region 5 on 9/7/06





Attachment 2 – Well Location Map

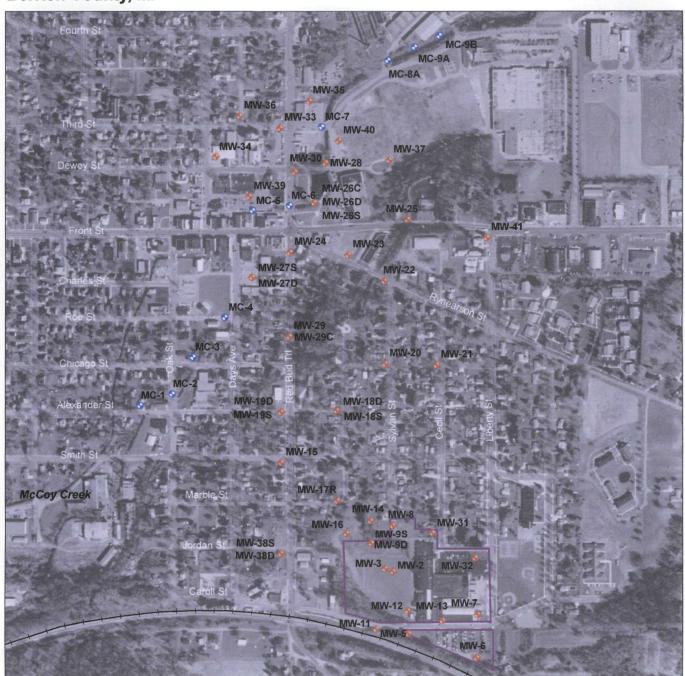
Well Locations

Superfund U.S. Environmental Protection Agency



Electro-Voice Inc. Berrien County, MI

MID005068143









Created by Sarah Backhouse U.S. EPA Region 5 on 9/7/06

Attachment 3 – Groundwater Flow

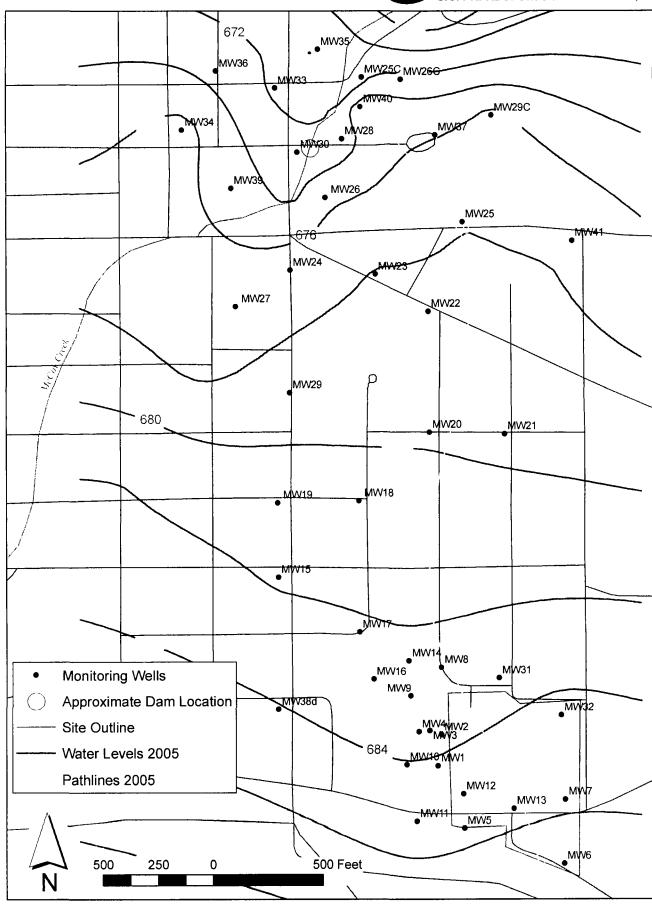


Figure 9 Groundwater Elevation Contours and Advective Transport: 2005

Attachment 4 – Target Zone Map for TCE

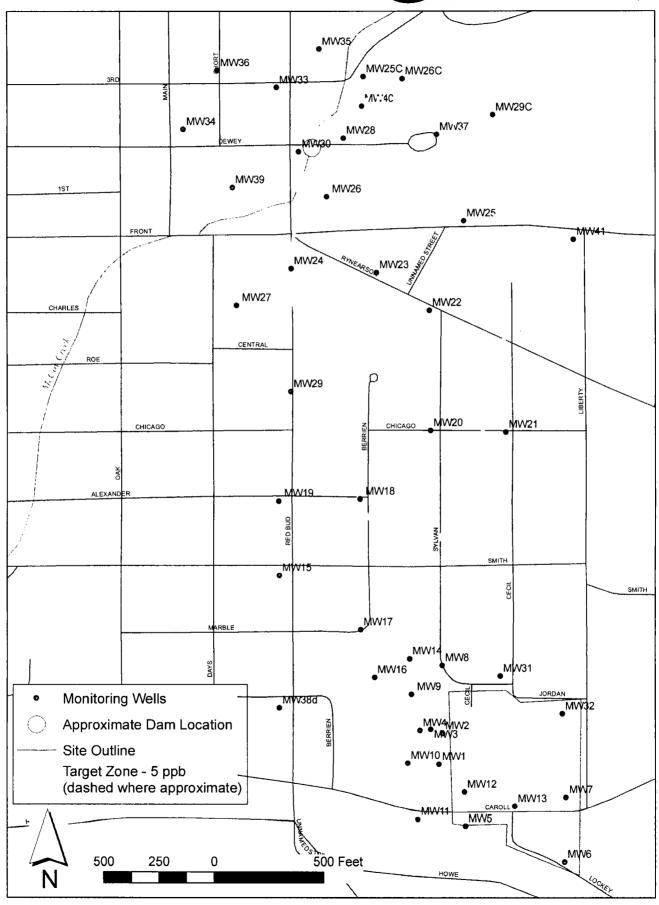


Figure 2 Target Zone Map for TCE

Attachment 5 – TCE Concentration December 1998

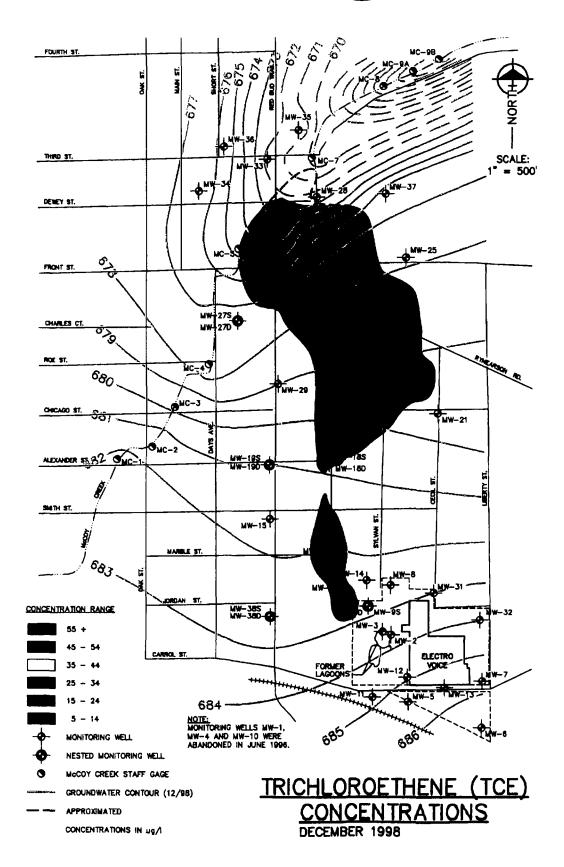


Figure 3 TCE Concentrations – 1998 (after Figure 3-9 FTC&H, June 1999)

Attachment 6 – TCE Concentration April 2005

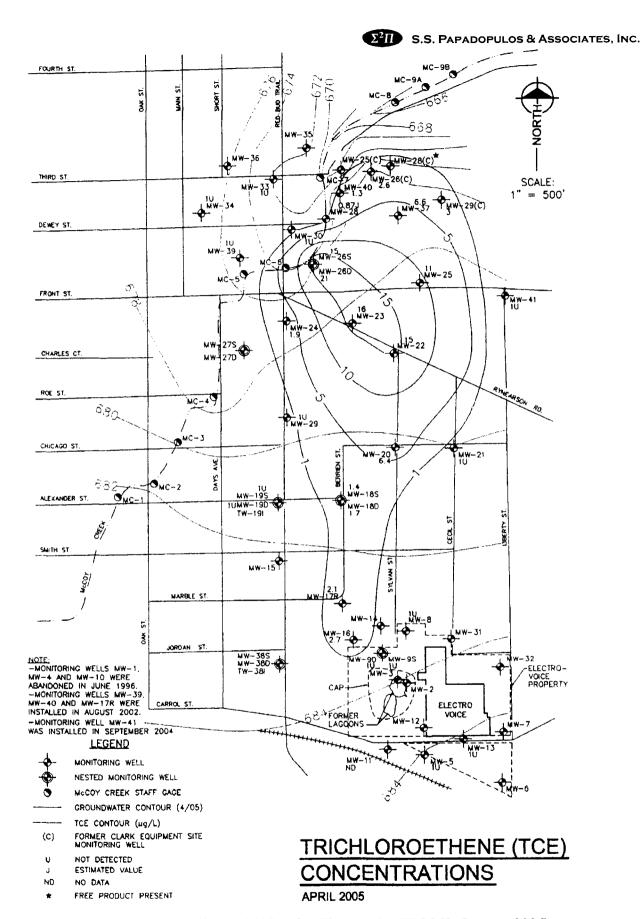


Figure 4 TCE Concentrations – 2005 (after Figure 4-2A FTC&H, January 2006)

$Attachment \ 7-Institutional \ Controls \ Map$

Institutional Control (IC) Review

Areas Depicting Required and Implemented Institutional Controls

Superfund U.S. Environmental Protection Agency



Electro-Voice Inc. Berrien County, MI

MID005068143





Cap Area Restrictive Covenant - Required IC

Site Boundary

7//1

Industrial Use Area Restrictive Covenant - Required IC

Conrail Railroad

Restricted Groundwater Use Area (2006) - Implemented IC

0 400 800 N

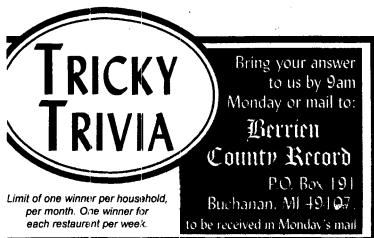


EPA Disclaimer: Please be advised that areas depicted in the map have been estimated. The map does not create any rights enforceable by any party. EPA may refine or change this data and map at any time.

Created by Sarah Backhouse U.S. EPA Region 5 on 9/12/06

Appendix 1 – Public Notice Advertisement

ce Lister and her friend, Catherine, create masterpieces in hy Tapia's Scribble Worms class at the Buchanan Art Center. sses are currently held on Saturdays for ages three through en. The Art Center offers classes and workshops on a ular basis for all ages. Call 697-4005 for more information, risit www.buchananartcenter.org.



Winners will receive their choice of:
one FREE Hot Beef Sandwich at Hilltop Cafe in Buchanan;
one FREE lunch special at Redbud Roadhouse in
Buchanan; one FREE lunch special at Sonny's Restaurant in
uchanan; one FREE Wallyburger & fries at B & W Olde Village Inn
in Buchanan;

or one FREE lunch at Hyerdall's Cafe in Bridgman.

Last Week's Winner(s):

Alma Huston, Harriett Flener and Tonya Reitz of Buchanan Keren Houck of Niles

Last Week's Answer:

Patron saint of Ireland is St. Patrick

Question of the Week:

New York City church were the Doomsday homb is
exploded destroying Earth in the 1970 movie Beneath the Planet of the Apes?

Indicate choice: Sonny's Hilltop Cafe Answer	☐ B & W Olde Village Inn☐ Redbud Roadhouse☐ Hyerdall's Cafe
Name ————	
Address ———	
City	Zip
Phone —	

hearts that we all hold some degree of responsibility for the problems of society? After all; society is us!

Why is it easier to care about the victims of the tsunami or hurricanes than to 'fess up to those in dire need among us? I'm not saying that those causes do not deserve our help. I'm only saying that we need, as a community, to stand up and in grand ol' American tradition say, "We're mad as heck and we just aren't going to take it any more."

It takes a lot of intestinal fortitude for a good community to openly admit it still has some serious problems. No one wants It's time to stand up for our town and all who try to improve it. Not only do we need to stand behind our police and school officials as they work through this current issue, but we need to continue to speak out and to take a stand on any issue that threatens the quality of life for any one of us.

Buchanan has the opportunity to show other communities how to be proud of not only how we care for our streetscapes but how we care for each other by facing our problems without shame, knowing that what affects one of us, affects us all.

Please share your thoughts.



EPA Reviews Electro-Voice Sugarfund Site Buchanan, Michigan

U.S. Environmental Protection Agency is reviewing the effectiveness of the cleanup at the Electro-Voice Superfund site. Superfund law requires five-year reviews of sites where the cleanup is either done or in progress but hazardous waste remains on-site. These five-year reviews are done to ensure that the cleanup remains effective and protects human health and the environment. This is the second five-year review for this site.

At the Electro-Voice site, EPA addressed hazardous waste that included volatile organic compounds, semi-VOCs and metals. The contaminants seeped into and contaminated the ground water under the site.

The first five-year review was completed in 2001. Based on the current evaluation of site conditions and the monitoring results, the cleanup plan selected for lagoons, the dry well soil area, and the on-property ground water monitoring remains protective of human health and the environment. The deed restrictions are in place at the site to restrict activities which could disturb the dry well area soil. The cleanup plan for off-property ground water has not been fully implemented, but it is expected to be protective of human health and the environment once completed.

As part of this five-year review EPA is looking at:

- site information
- · how well the cleanup is working
- how the cleanup was done
- · any future actions needed

The results will be available for viewing at:

Buchanan Public Library 117 Front St. Buchanan

Questions or concerns regarding the cleanup or the review should be directed to:

Giang-Van Nguyen Remedial Project Manager EPA Region 5 (SR-6J)

77 W. Jackson Blvd. Chicago, IL 60604 (312) 886-6726

Toll-free: (800) 621-8431, weekdays 10am – 5:30pm nguyen.giang-van@epa.gov

Appendix 2 – Title Commitment

MERIDIAN TITLE CORPORATION

Agent for: First American Title Insurance Company

309 Broadway Niles, MI 49120-2703 Title Department (269) 683-5938 Title Department FAX (269) 683-5710

File No.: 10	062mic06	Effective Date: June 28, 2006 at 8:00 AM		
Customer Reference No.:		Property Address: 600 Cecil Street Buchanan, MI 49022		
Prepared Fo	or: CB Richard Eilis	AMENDED		
1. Policy of	r Policies to be issued:			
(a) 🗷	ALTA Owner's Policy - 10/17/92	Amount	\$35,000.00	
Proposed In	sured: Torsten, LLC			
(b) []	ALTA Loan Policy - 10/17/92	Amount		
Proposed Insured:				

- 2. The estate or interest in the land described or referred to in this Commitment is Fee Simple
- 3. Title to said estate or interest in said land is at the effective date hereof vested in:

Texel Communications, Inc. (formerly known as Telex Newco, Inc.)

4. The land referred to in this Commitment is located in the City of Buchanan, County of Berrien, State of Michigan described as follows:

SEE EXHIBIT A ATTACHED

EXHIBIT A

PARCEL I: Lot(s) 28 through 34 inclusive and part of vacated Jordan Street, of RYNEARSON'S ADDITION TO THE VILLAGE OF BUCHANAN, according to the Plat thereof recorded in Liber 27 of Deeds, page(s) 493; Lots 29, 168, 167, 30, 31, 32, 166, 88 and part of vacated Sylvan Avenue, LIBERTY HEIGHTS ADDITION TO THE VILLAGE OF BUCHANAN, according to the Plat thereof, recorded in Liber 6 of Plats, page 6; and part of the Northwest Quarter of Section 36, Town 7 South, Range 18 West, all described as follows: Commencing at the West Quarter corner of said Section 36, thence East, on the East and West Quarter line of said Section 36 a distance of 513.54 feet, thence North 00°29'32" East 64.56 feet (deeded North 00°37' East 64.56 feet) to the place of beginning of the parcel of land herein described, thence continuing North 00°29'32" East (deeded North 00°37' East), on the East line of Lots 26 and 27, Rynearson's Addition to the Village of Buchanan, 141,24 feet to the Southeast corner of Lot 28, said Rynearson's Addition, thence North 89°35'43" West, on the South line of said Lot 28, a distance of 132.00 feet to the Southwest corner of said Lot 28, thence North 00°29'32" East, on the East right of way line of Berrien Street, 495.00 feet to the Northwest corner of Lot 34, said Rynearson's Addition, thence South 89°35'43" East, on the North line of said Lot 34, a distance of 132.00 feet to the Northeast corner of said Lot 34, thence South 00°29'32" West, on the West line of Lots 27 and 28, said Liberty Heights Addition, 71,16 feet to the Northwest corner of Lot 29, said Liberty Heights Addition, thence South 89°30'28" East (deeded East) on the North line of said Lot 29, a distance of 188.00 feet to the Northwest corner of lot 30, of said Liberty Heights Addition. thence North (10°29'32" East, on the East right of way line of Sylvan Avenue, 24.74 feet, thence Northeasterly, on said East right of way line, 57.96 feet on a 36.00 foot radius curve to the left whose chord bears North 00°29'32" East 51.90 feet, thence North 00°29'32" East 51.90 feet, thence North 00°29'32" East, on said East right of way line, 23.36 feet to the Northwest corner of Lot 32, said Liberty Heights Addition, thence South 89°30'28' East, on the North line of said Lot 32, a distance of 138,00 feet to the Northeast corner of said Lot 32, thence South 00°29'32" West, on the East line of Lots 31 and 32, of said Liberty Heights Addition, 100.00 feet to the Northwest corner of Lot 88, of said Liberty Heights Addition, thence South 89°30'28" East (deeded East) on the North line of said Lot 88, a distance of 133.00 feet to the Northeast corner of said Lot 88, thence South 00°29'32" West (deeded South 00°27' West) on the West right of way lien of Cecil Avenue, 100.00 feet to the South right of way line of Jordan Street. thence South 89°30'28" East, on said right of way line, 326.00 feet (deeded South 89°29' East 326.05 feet) to the West right of way line of Liberty Avenue, thence South 00°29'32" West, on said West right of way line, 472.86 feet (deeded South 00°38' West 469.15 feet) to the North right of way line of Carroll Street, thence West, on said North right of way line, 737,23 feet (deeded 748,52 feet), thence North 74°32'58" West, on said North right of way line. 54.65 feet (deeded North 71°05' West 43.18 feet) to the place of beginning.

PARCEL II: Part of the Southwest Quarter of Section 36, Town 7 South, Range 18 West, described as follows: Commencing at a point on the East and West Quarter line of said Section 36 that is 713.42 feet East of the West Quarter corner of said Section 36, thence East, on said Quarter line, 623.20 feet, thence South 00°56′00" West 259.00 feet, thence North 67°17′49" West 670.97 feet (deeded North 67°19' West 671.00 feet) to the place of beginning.

File No.: 1062mic06 Part I, SCHEDULE B

THE FOLLOWING ARE THE REQUIREMENTS TO BE COMPLIED WITH:

1. Instruments necessary to create the estate or interest to be insured must be properly executed, delivered and duly filed for record.

- a) Properly executed and acknowledged Corporate Warranty Deed to the proposed insured.
- b) Affidavit in Aid of Title stating that Telex Communications Holdings, Inc. f/k/a Telex Communications, Inc. is successor to Gull Company of Buchanan, Inc., a Delaware Corporation and Electro-Voice, Inc.
- 2. Affidavit by Owner.
- 3. Pay taxes for the 2006 Summer tax year(s).
- 4. Provide certified copy of resolution of the Board of Directors of Texel Communications, Inc. (formerly known as Telex Newco, Inc.) authorizing this sale to Torsten, LLC and naming the officers of Seller (by name and office or we must also require a current certificate of incumbency), who are to execute and deliver such deed. The certificate should be dated the same date of the deed and must certify that the aforesaid resolution, whenever it was passed, is still in full force and effect, unchanged, as of the certificate date.

File Not: 1062mic06 Part II, SCHEDULE B

THE POLICY OR POLICIES TO BE ISSUED WILL CONTAIN EXCEPTIONS TO THE FOLLOWING MATTERS UNLESS THE SAME ARE DISPOSED OF TO THE SATISFACTION OF THE COMPANY.

1. Defects, liens, encumbrances, adverse claims, or other matters, if any, created, first appearing in the public records or attaching subsequent to the effective date hereof but prior to the date the proposed insured acquires for value of record the estate or interest or mortgage thereon covered by this Commitment.

2. Standard Exceptions:

- a) Rights or claims of parties in possession not shown by the public records.
- b) Easements, or claims of easements, not shown by the public records.
- c) Encroachments, overlaps, boundary line disputes, or other matters which would be disclosed by an accurate survey or inspection of the premises.
- d) Any lien, or right to a lien, for services, labor, or material heretofore or hereafter furnished, imposed by law and not shown by the public records.

3. Special Exceptions:

a) Taxes for the year 2005 and prior years are paid.

Tax No. 11-58-0036-0259-01-3 2005 Summer Tax \$6,321.13 2005 Winter Tax \$646.30 2006 Summer Tax \$6.707.37 DUE

2005 Assessed Valuations: State Equalized \$158,700.00 Taxable Value \$118,875.00

2006 Assessed Valuations: State Equalized \$133,400.00 Taxable Value \$122,797.00

FOR INFORMATION ONLY: 2005 HOMESTEAD NONE FOR INFORMATION ONLY: 2006 HOMESTEAD NONE

Tax No. 11-58-6900-0028-00-2 2005 Summer Tax \$46.97 2005 Winter Tax \$4.69 2006 Summer Tax \$49.82 DUE

2005 Assessed Valuations: State Equalized \$2,000.00 Taxable Value \$884.00

2006 Assessed Valuations: State Equalized \$2,000.00 Taxable Value \$913.00

FOR INFORMATION ONLY: 2005 HOMESTEAD NONE FOR INFORMATION ONLY: 2006 HOMESTEAD NONE

Tax No. 11-58-6900-0033-01-4

File Not: 1062mic06 Part II, SCHEDULE B

2005 Summer Tax \$94.98 2005 Winter Tax \$9.49 2006 Summer Tax \$100.73 **DUE**

2005 Assessed Valuations: State Equalized \$10,100.00 Taxable Value \$1,787.00

2006 Assessed Valuations: State Equalized \$10,100.00 Taxable Value \$1,845.00

FOR INFORMATION ONLY: 2005 HOMESTEAD NONE FOR INFORMATION ONLY: 2006 HOMESTEAD NONE

Tax No. 11-58-4500-0031-00-7 2005 Summer Tax \$762.37 2005 Winter Tax \$89.36 2006 Summer Tax \$808.95 **DUE**

2005 Assessed Valuations: State Equalized \$20,200.00 Taxable Value \$14,338.00

2006 Assessed Valuations: State Equalized \$19,800.00 Taxable Value \$14,811.00

FOR INFORMATION ONLY: 2005 HOMESTEAD NONE FOR INFORMATION ONLY: 2006 HOMESTEAD NONE

Tax No. 1:-06-0036-0009-00-1 2005 Summer Tax \$ 165.17 2005 Winter Tax \$34.44 2006 Summer Tax \$177.64 **DUE**

2005 Assessed Valuations: State Equalized \$4,700.00 Taxable Value \$4,700.00

2006 Assessed Valuations: State Equalized \$7,100.00 Taxable Value \$4,855.00

FOR INFORMATION ONLY: 2005 HOMESTEAD NONE FOR INFORMATION ONLY: 2006 HOMESTEAD NONE

The Summer Taxes are due and payable July 1, 2006 and if not paid before September 15, 2006, they become delinquent. NOTE: The Summer Tax Rolls are not yet returned to the Office of the Berrien County Treasurer.

NOTE: Tax information supra is limited to the date of the most current computer input information in the Treasurer's Office and not necessarily the effective date hereof. A check with the Treasurer's Office should be made to determine the exact amount of taxes due, if any. PLEASE NOTE EXEMPTION VALUATION INFORMATION MAY NOT BE FULLY POSTED.

This Commitment is valid only if Schedules A and B are attached. Schedule B2 consists of 3 page(s)

Part II, SCHEDULE B File No.: 1062mic06

b) Taxes which become a Lien pursuant to Public Act 143 of 1995 and any other taxes and/or assessments which become a Lien or become due and payable subsequent to the date of this commitment.

- c) Taxes and assessments that become a lien against the property after date of closing. The Company assumes no liability for tax increases occasioned by retroactive revaluation, changes in the land usage or loss of any homestead exemption status for the insured premises.
- d) Restrictions contained in Declaration of Restrictions on Real Property recorded January 13, 1994 in Liber 1619, page 826 in the Office of the Register of Deeds Records of Berrier County, Michigan.

NOTE: This exception omits any covenant, condition or restriction based on race, color, religion, sex, handicap, familial status or national origin, unless and only to the extent that the restriction is not in violation of state or federal law, or relates to a handicap, but does not discriminate against hand capped people.

Restrictions contained in Warranty Deed recorded January 30, 1956 in Liber 564, page 317 in the e) Office of the Register of Deeds Records of Berrien County, Michigan.

NOTE: This exception omits any covenant, condition or restriction based on race, color, religion, sex, handicap, familial status or national origin, unless and only to the extent that the restriction is not in violation of state or federal law, or relates to a handicap, but does not discriminate against handicapped people.

- Easement and associated rights granted to City of Buchanan by Electro-Voice, Inc. in an instrument f) dated August 22, 1956 and recorded August 27, 1956 in Liber 156, page 232 in the Office of the Register of Deeds of Berrien County, Michigan.
- Vacated portion of Jordan Street East of Berrien Street described in captioned real estate was g) vacated by Vacation Resolution No. 6883, dated September 28, 1973 and recorded October 11, 1973 in Liber 962, page 832 in the Office of the Register of Deeds of Berrien County, Michigan.
- Easement for Alley Vacations Liberty Heights Addition reserved by City of Buchanan as evidenced in a Resolution dated October 24, 1972 and recorded December 26, 1972 in Liber 943, page 461 in the Office of the Register of Deeds of Berrien County, Michigan.
- Vacated alleys described in captioned real estate was vacated by Vacation Resolution dated i) October 24, 1972 and recorded December 26, 1972 in Liber 943, page 461 in the Office of the Register of Deeds of Berrieri County, Michigan.
 - Terms and provisions contained in Notice of Entry of Operable Unit Consent Decree recorded in j) Liber 1619, page 812, Berrien County Records.
 - k) Notice of Obligation to provide Access recorded in Liber 1619, page 833, Berrien County Records.
- Terms and conditions of Notice of Zoning Regulations recorded in Liber 1294, page 1122, Berrien County Records.
- Unrecorded waterline easement to the City of Buchanan, Michigan running Southwesterly and South from Cecil Avenue to Carroll Street.
- Terms and conditions contained in Quit Claim Deed recorded in Liber 57, page 476, Berrien County Records.
 - Terms and conditions of an Operable Unit Consent Decree dated December 21, 1993 and recorded o) January 13, 1994 in Liber 1616, page 1053, Berrien County Records.

Appendix 3 – Site Survey

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Appendix 4 – Telex Restrictive Covenant

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DECLARATION OF RESTRICTIVE COVENANT

U.S. EPA Site No: 05E8

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This Declaration of Restrictive Covenant is made by and between Telex Communications, Inc., ("Telex" or "Grantor"), whose address is 12000 Portland Avenue South, Burnsville, Minnesota, 55337, Mark IV Industries, Inc. ("Mark IV" or "Grantee") whose address is One Towne Center, 501 John James Audubon Parkway, Amherst, New York 14226-7810 and the Michigan Department of Environmental Quality ("MDEQ") whose address is c/o Section Chief, Compliance & Enforcement Section, Remediation and Redevelopment Division, Michigan Department of Environmental Quality, P.O. Box 30426, Lansing, Michigan 48909-7926 and is recorded with the Berrien County Register of Deeds for the purpose of protecting public health, safety and welfare, and the environment by prohibiting or restricting activities that could result in unacceptable exposure to environmental contamination present at the Property commonly known as 600 Cecil Street, City of Buchanan, Berrien County, Michigan that is legally described in Appendix A ("Property").

Third Party Beneficiary: Telex, on behalf of itself and its successors, transferees and assigns, Mark IV on behalf of itself and its successors, transferees, and assigns, and MDEQ and its successors and assigns agree that the United States of America, acting by and through U.S. Environmental Protection Agency ("U.S. EPA"), having an address c/o Attn: Director, Superfund Division, Region 5, 77 W. Jackson Blvd. SR-6J, Chicago, Illinois 60604, and its successors and assigns shall be a Third Party Beneficiary under this instrument. No other third party beneficiary is intended to be created herein and nothing contained in this instrument shall be interpreted or imply the existence of any benefit in any entity not specifically identified in this instrument.

Summary of Response Activities

Telex is the owner of the Property, which is part of the Electrovoice Superfund Site (the "Site"). The Site was placed on the National Priorities List ("NPL"), and is a facility, as that term is defined in Section 101(9) of the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. § 9601 et seq. ("CERCLA") and Section 20101(0) of Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, MCL 324.20101(0) et seq. ("NREPA"). The Property has been subject to Response Activities pursuant to the NREPA, in a manner consistent with CERCLA, for

environmental contamination related to the Site. The Property includes former lagoons where electroplating wastes were disposed and a dry well area where paint wastes and solvents were disposed. On June 8, 1992, the U.S. EPA Region 5 Regional Administrator selected a remedial action in a Record of Decision ("ROD") for the Property, which was subsequently modified by a series of Explanation of Significant Differences including an ESD dated April 16, 1996. The ROD as modified by the BSDs requires: a) land and groundwater use restrictions; b) subsurface volatilization and ventilation system treatment of soils in the dry well area to cleanup levels based on limited industrial use; c) natural attenuation to achieve groundwater standards; d) construction of a hazardous waste cap described in Appendix B that consists of three feet of clay covered by a two foot layer of sand and four inches of topsoil over the lagoon area. In 1999, U.S. EPA selected a ROD to address groundwater contamination at the Site. Response Activities were implemented at the Property pursuant to a Consent Decree entered on December 21, 1993 in the case of United States of America v. Electro-Voice, Inc., Civil Action No. 1: 93-CV-753 (W.D.Mich.S. Div.) (the "1993 Consent Decree") and pursuant to a Consent Decree entered on February 15, 2001 in the case of United States of America v. Mark IV Industries, Electro-Voice, Inc. n/k/a Telex Communications. Inc. Civil Action No. 1: 00-CV-918 (W.D. Mich S. Div) (the "2001 Consent Decree") (the 1993 Consent Decree and the 2001 Consent Decree, collectively referred to as the "Consent Decrees").

Information pertaining to the environmental conditions at the Property and Response Activities undertaken at the Site is on file with U.S. EPA Superfund Division and the MDEQ, Remediation and Redevelopment Division.

The restrictions contained in this Restrictive Covenant are based upon information available to U.S. FiPA and the MDEQ at the date this instrument is recorded. The discovery of environmental conditions at the Property unknown as of the recording date of this instrument, or use of the Property in a manner inconsistent with the restrictions described herein, may result in this Restrictive Covenant not being protective of public health, safety, and welfare, and the environment.

Definitions

"Mark IV" shall mean Mark IV Industries, Inc., an Owner of the Property through its subsidiary Electro-Voice, Inc. as of the date of the execution of the 1993 Consent Decree and as the Settling Defendant in the 2001 Consent Decree.

"MDBQ" means the Michigan Department of Environmental Quality, its successor entities, if any, and those authorized persons or entities acting on its behalf.

"Owner" means, at any given time, the then current title holder of the Property or any portion thereof, including the current title holder's lessees, easement holders, authorized agents, employees, or persons acting under its direction and control.

"Telex" shall mean Telex, as successor in interest to Electro-Voice and the owner of the Property as of the date of the execution of this Declaration of Restrictive Covenant, and an Owner for as long as Telex is current title holder of the Property or any portion thereof.

"Response Activities" shall mean, consistent with Section 101(25) of CERCLA, such actions as have been or may be necessary to conduct any removal, remedy or remedial action, as those terms

are defined in Sections 101(23) and 101(24) of CERCLA, at the Property and/or at the Site, including enforcement activities related thereto.

"J.S. EPA" shall mean the United States Environmental Protection Agency, its successor entities and those persons or entities acting on its behalf.

All other terms used in this document which are defined in Part 3, Definitions, of the NREPA; Part 201 of the NREPA; or the Part 201 Administrative Rules ("Part 201 Rules"), 1990 AACS R 299.5101 et seq., shall have the same meaning in this document as in Parts 3 and 201 of the NREPA and the Part 201 Rules, as of the recording date of this instrument.

NOW THEREFORE.

Telex. Grantor, on behalf of itself, its successors, transferees and assigns, in consideration of the response activities conducted at the Property, covenants and declares that the Property shall be subject to the following restrictions and covenants on use that run with the land, and intends that said restrictions will run with the land and may be enforced in perpetuity against Owners (including Telex and Telex's successors in title) by the following entities: a) Mark IV, as Grantee; b) MDEQ and its assigns pursuant to Part 201 of NREPA; and c) U.S. EPA, and its assigns, as Third Party Beneficiary):

1. Land Use Restrictions and Covenants:

- a. Restricted Land Use: The Owner shall restrict the use of the Property described in Appendix A to those uses compatible with the Property's zoned industrial land use and the limited Commercial II, III, and IV/limited Industrial category under Section 2 of 20120a(1)(i) of the Michigan NREPA. Examples of uses that are not compatible and are prohibited include: residential use; occupancy on a 24-hour basis; and uses to house, educate or provide care for children, the elderly, the infirm, or other sensitive subpopulations.
- b. Restricted groundwater use. The Owner shall prohibit any construction of wells or other devices to extract groundwater for consumption, infigation, or any other use, except for wells and devices that are part of an EPA approved or MDEQ approved response activity within the Property designated in Appendix A. Short-term dewatering for construction purposes is permitted provided the dewatering, including management and disposal of the groundwater, is conducted in accordance with all applicable local, state, and federal laws and regulations and does not cause or result in a new release, exacerbation of existing contamination, or any other violation of local, state, and federal environmental laws and regulations including, but not limited to, RCRA and Part 201 of the NEEPA.
- c. No interference with cap and industrial use area. The Owner shall prohibit any excavation or other intrusive activity that could affect the integrity of the hazardous, waste cap placed over the lagoon area that is described in Appendix B. The cap consists of three feet of clay covered by a two foot layer of sand and four inches of topsoil. The Owner shall not disturb the electroplating wastes underneath the cap. The Owner shall restrict the use of the area designated as "industrial use" in Appendix B to those uses compatible with a limited Industrial category under Section 2 of 20120a(1)(i) of the Michigan NREPA and shall prohibit any excavation or other intrusive activity in this area.

- d. <u>No Interference with markers</u>. The Owner shall not remove, cover, obscure, or otherwise alter or interfere with the "capped iron (set)" permanent markers placed at the boundaries of the hazardous waste cap at the locations noted in Appendix B. The Owner agrees for itself and its successors in title to keep vegetation and other materials clear of the permanent markers to assure that the markers are readily visible.
- e. <u>No interference with groundwater wells</u>: The Owner shall not interfere with the construction, operation, maintenance, monitoring, efficacy, or physical integrity of the groundwater wells identified in Appendix C.
- f. No excavation under buildings: The extent of contamination, if any, associated with the soils underneath the foundations of the buildings demarcated in Appendix B has not been determined. The Owner shall not demolish the building foundations and shall not excavate soils under the buildings demarcated in Appendix B unless the Owner performs an extent of contamination study and risk determination of such soils pursuant to an EPA approved work plan.
- Notice. Telex agrees for itself and its successors in title that notice shall be provided to the USEPA Region 5 and the MDEQ of the Owner's intent to transfer any interest in the Site at least thirty (30) business days prior to consummating the conveyance. A conveyance of title, easement, or other interest in the Site shall not be consummated by the Owner without adequate and complete provision for compliance with the terms and conditions of this Restrictive Covenant. The notice required to be made to the MDEQ under this Paragraph shall be made to: Director, MDEQ, P.O. Box 30473, Lansing, Michigan 48909-7973; and shall include a statement that the notice is being made pursuant to the requirements of this Restrictive Covenant. The notice required to be made to the USEPA under this Paragraph shall be made to: Director, Superfund, United States Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, D-8J, Chicago, Illinois, 60604-3507. A copy of this Restrictive Covenant shall be provided to all future owners, heirs, successors, lessees, easement holders, assigns, and transferees by the person transferring the interest.
- 3. Access. Telex, on behalf of itself, its successors and assigns, provides an irrevocable and continuing right of access at all reasonable times to the Property to Mark IV and its representatives, and to MDEQ and its representatives, for purposes of:
 - a) Conducting and/or monitoring investigations relating to the nature and extent of contamination on or near the Property including, without limitation, sampling of air, water, sediments, soils, and specifically, without limitation, obtaining split or duplicate samples;
 - b) Monitoring and/or implementing the Response Activities to be selected in a ROD for the Property;
 - c) Verifying any data or information submitted to U.S. EPA and/or the MDEQ and determining and monitoring compliance with the Consent Decrees, any ROD relating to Property and/or the Site and any implementing statement of work;
 - d) Verifying that no action is being taken on the Property in violation of the terms of this instrument, or in violation of any federal or state environmental laws or regulations applicable to any Response Activities at the Property or at the Site;

- e) (conducting periodic reviews of Response Activities at the Property and at the Site, including but not limited to, reviews required by applicable statutes and/or regulations;
- f) Implementing additional or new Response Activities, as that term is defined above, if the remedial action identified in the Summary of Response Activities section of this Declaration results in any hazardous substances, pollutants or contaminants remaining at the Site above levels that allow for unlimited use and unrestricted exposure, and U.S. BPA, in consultation with MDEQ and pursuant to Section 121(c) of CERCLA, determines that, upon its completion, the selected remedy for the Property will not be protective of public health, weighter or the environment; or
- g) Implementing additional or new response activities, as that term is defined in Section 20101(1)(ee) of the NREPA, if the remedial action selected in the ROD for the Property results in any hazardous substances, pollutants or contaminants remaining at the Site above the criteria developed pursuant to Section 20120a(1)(a) of the NREPA, and MDEQ, in consultation with U.S. EPA, determines that, upon its completion, the selected remedy will not be protective of the public health, safety, or welfare, or the environment.
- 4. EPA Entry, Access and Response Authority: MDEQ, Mark IV and Telex consent to officers, employees, contractors, and authorized representatives of the EPA entering and having continued access to this Property for the purposes described in paragraph 3. Nothing in this instrument shall limit or otherwise affect U.S. EPA's or the MDEQ's right of entry and access, or authorities to take Response Activities as defined in this instrument, as well as in Section 20101(1)(ee) Part 201 of the NREPA, under CERCLA, the National Contingency Plan, 40 C.F.R. Part 300, the NREPA, and any successor statutory provisions, or other state or federal law.
- 5. Term: Telex intends that this Declaration of Restrictive Covenants shall run with land and be binding on Telex, and its successors and assigns, including all lessees, easement holders, their assigns, and its authorized agents, employees, or persons acting under their direction and untrol. This Restrictive Covenant will expire upon written approval of MDBQ and U.S. EPA pursuant to Paragraph 6 below.
- Modification: The Owner may request in writing to U.S. EPA and the MDIQ, at the address given below, modifications to or recision of this instrument. This instrument may be modified or rescinded only with the written approval of U.S. EPA and the MDEQ. Any modification to or recision of this Environmental Protection Essement and Declaration of Restrictive Covenant shall be filed with the appropriate Registrar of Deeds by the then Owner and a certified copy shall be returned to the MDEQ and U.S. EPA at the addresses listed above.
- Restrictive Covenant by specific performance or other legal action in a court of competent jurisdiction against Owners of all or part of the Property. Telex, on behalf of itself, and its successors in title, intends and agrees that the State of Michigan, through the MDEQ, pursuant to Part 201 of NREPA, Mark IV, as Grantee, and the United States on behalf of U.S. EPA, as a Third Party Beneficiary, may enforce the covenants and restrictions set forth in this Declaration of Restrictive Covenant against Telex and its successors in title (Owners) by specific performance or other legal

action in a court of competent jurisdiction. All remedies available hereunder shall be in addition to any and all other remedies at law or in equity, including CERCLA.

- 8. Severability. If any provision of this Declaration of Restrictive Covenant is held to be invalidiby any court of competent jurisdiction, the invalidity of such provision shall not affect the validity of any other provision hereof, and all other such provisions shall continue unimpaired and in full force and effect.
- 9. Transfer of Interest: The Owner shall provide notice to the MDEQ and U.S. EPA of the Owner's intent to transfer any interest in the Property, or any portion thereof, thirty (30) days prior to consummating the conveyance. A conveyance of title, easement, or other interest in the Property shall not be consummated by the Owner unless the Owner complies with the applicable previsions of Section 20116 of the NREPA. The Owner shall include in any instrument conveying any interest in any portion of the Property, including but not limited to deeds, leases and mortgages, a notice which is in substantially the following form:

NOTICE: THE INTEREST CONVEYED HEREBY IS SUBJECT TO A DECLARATION OF RESTRICTIVE COVENANT, DATED______, 200_RECORDED WITH THE _________COUNTY REGISTER OF DEEDS, LIBER_____, PAGE ______.

10). Notices: Any notice, demand, request, consent, approval, or communication that is required to be made or obtained under this instrument shall be made in writing and include a statement that the notice is being made pursuant to the requirements of this Declaration of Restrictive Covenant, U.S. EPA Site No. 05E8, and shall be served either personally or sent via first class mail, postage prepaid, as follows:

For U.S. EPA:

Director

Superfund Division
U.S. EPA Region 5
77 W. Jackson Blvd. SR-6J

Chicago, Illinois 60604

With a copy to:

Janet R. Carlson

Associate Regional Counsel

U.S. EPA Region 5

77 W. Jackson Blvd. C-14J Chicago, Illinois 60604

For the MDEQ:

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Director

Michigan Department of Environmental Quality

P.O. Box 30473

Lansing, Michigan 48909-7973

With a copy to:

Cindy Fairbanks

Site Evaluation Unit - Superfund Section Remediation and Redevelopment Division Michigan Department of Environmental Quality

P.O. Box 30426

Lansing, Michigan 48909-7973

For Telex:

Kristine L. Bruer

Vice President and General Counsel

Telex Communications, Inc. 12000 Portland Avenue South

Burnsville, MN 55337

With a copy to:

Robert W. Caston

Robert Bosch Corporation

Vice President, Environmental Health & Safety

Assistant General Counsel 401 N. Bendix Drive

South Bend, Indiana 46628

For Mark IV:

Richard Grenolds, Sr.
Chief Accounting Officer
Mark IV Industries, Inc.
One Towne Center

501 John James Audubon Parkway

P.O. Box 810

Amherst, New York 14226-0810

With a copy to:

Deborah J. Chadsey Kavinoky Cook, LLP 726 Exchange St., Suite 800 Buffalo, NY 14210

- 11. Covenants: Telex hereby covenants to and with MDEQ and its assigns and Mark IV and its assigns that Telex is lawfully seized in fee simple of the Property, that the Telex has a good and lawful right and power to sell and convey it or any interest therein, and Telex will forever warrant and defend the title thereto and the quiet possession thereof.
- 12. Authority to Execute Declaration of Restrictive Covenant. The undersigned person executing this Declaration of Restrictive Covenant is the Owner and represents and certifies that he or she is duly authorized and has been empowered to execute and deliver this Instrument. Telex, hereby warrants that it is lawfully seized in fee simple of the Property, that it has a good and lawful right and power to sell and convey it or any interest therein, and that it will forever warrant and defend the title thereto and the quiet possession thereof

13. Appendices

Appendix A - Legal Description and survey of the Property

Appendix B - Legal Description and Survey of the Hazardous Waste Cap (including markers) and Limited Industrial Use area

Appendix C - Groundwater Well Locations

Name: ARES POLITER

Its: CFC

STATE OF MINNESOTH COUNTY OF HERNEPIN

Personally came before me this 11 day of Sept., 2006, the above-named as known as as VPand CFO of Telex Communications, Inc. to me known to be the person who executed the foregoing instrument and acknowledged the same.

Barlean E. Sheman)
Notary Public

Borbara E. Sherman

[Print or type name]

Commissioned in County Hennepin

My Commission Expires: 1|31|2010

This instrument was prepared by and after recording, should be returned to:

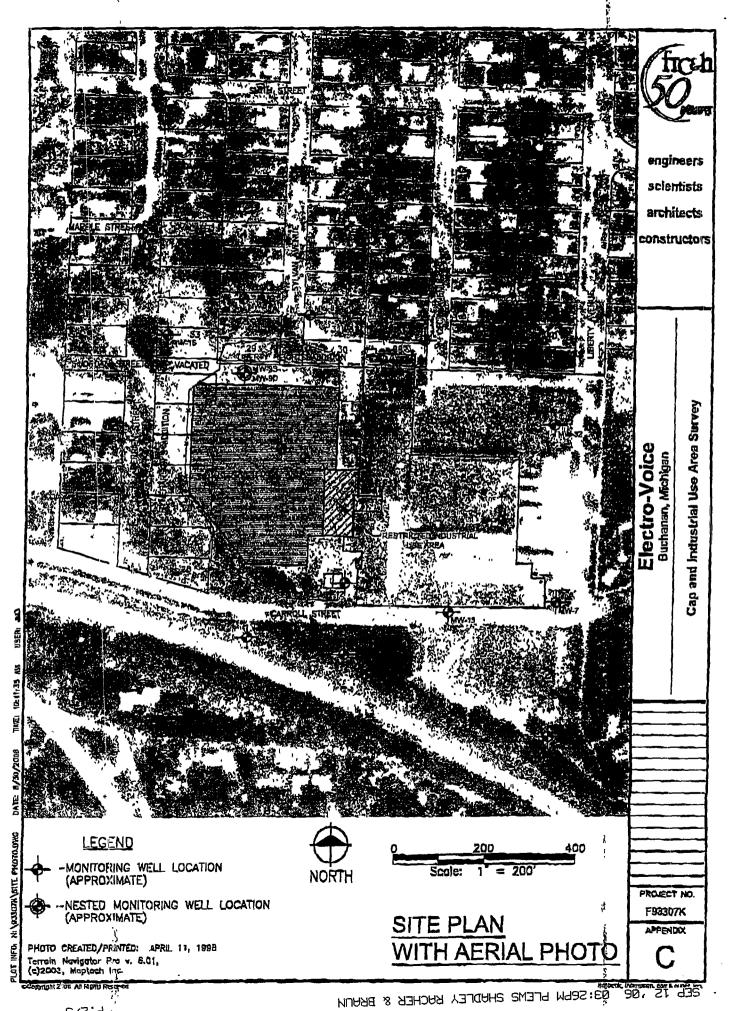


APPENDIX A LEGAL DESCRIPTION OF PROPERTY

PARCEL I: Lot(s) 28 through 34 inclusive and part of vacated Jordan Street, of RYNEARSON'S ADDITION TO THE VILLAGE OF BUCHANAN, eccording to the Plat thereof recorded in Liber 27 of Deeds, page(s) 463; Lots 29. 168, 167, 30, 31, 32, 188, 88 and part of vacated Sylvan Avenue, LIBERTY HEIGHTS ADDITION TO THE VILLAGE: OF BUCHANAN, according to the Pial thereof, recorded in Liber 6 of Plats, page 6; and part of the Northwest Quarter of Section 36, Town 7 South, Range 18 West, all described as follows: Commencing at the West Quarter corner of said Section 36, thence East, on the East and West Quarter line of said Section 36 a distance of 513.54 feet, thence North 00°29'32" East 64.56 feet (deeded North 00°37' East 64.56 feet) to the place of beginning of the parcel of land herein described, thence continuing North 00°29'32" East (deeded North 00°37' Essi), on the East line of Lots 26 and 27, Rynearson's Addition to the Village of Buchanan, 141,24 feet to the Southeast comer of Lot 28, said Rynearson's Addition, thence North \$9°35'43" West, on the South line of said Lot 28, a distance of 132,00 feet to the Southwest corner of said Lot 28, thence North 00*29*32" East, on the East right of way line of Berrien Street, 495.00 feat to the Northwest corner of Lot 34, said Rynaarson's Addition, thence South 89°35'43" East, on the North line of said Lot 34, a distance of 132.00 feet to the Northeast corner of said Lot 34, thence South 00°29'32" West, on the West line of Lots 27 and 28, said Liberty Heights Addition, 71,16 feet to the Northwest corner of Lot 29, sald Liberty Heights Addition, thence South 89°30'28° East (deeded East) on the North line of said Lot 29, a distance of 188.00 feet to the Northwest comer of lot 30, of said Liberty Heights Addition, thence North 00°29'32' East, on the East right of way line of Sylvan Avenue, 24.74 feet, thence Northeasterly, on sald East right of way line, 57.96 feet on a 35.00 foot radius curve to the left whose chord bears North 00:29 32" East 51.90 feet, thance North 00"29"32" East 51.90 feet, thance North 00"29"32" East, on said East right of way line. 23.36 feet to the Northwest comer of Lot 32, said Liberty Heights Addition, thence South 89°30'28' East, on the North line of said Lot 32, a distance of 138,00 feet to the Northeast corner of said Lot 32, thence South 00°29'32" West, on the East line of Lots 31 and 32, of said Liberty Heights Addition, 100.00 feet to the Northwest comer of Lot 88, of sold Liberty Heights Addition, thence South 89°30'28" East (deaded East) on the North line of said (of 88, a distance of 128.00 feet to the Northeast corner of said Lot 88, thence South 00°29'92" West (deeded South 00°27' West) on the West right of way lian of Cecil Avenue, 100.00 feet to the South right of way line of Jordan Street. thence South 89°30'28" East, on said right of way line, 325,00 feet (deeded South 89°29" East 326.05 feet) to the West right of way line of Liberty Avenue, thence South 00°29'32" West, on said West right of way line, 472.86 feet deeded South 00°38' West 469.15 feet) to the North right of way line of Carroll Street, thence We. , on said North right of way line, 737.23 feet (deeded 748.52 feet), thence North 74°32'58" West, on said North right of way line, 54.65 feet (deaded North 71°05' West 43.18 feet) to the place of beginning.

PARCEL III: Part of the Southwest Quarter of Section 36, Town 7 South, Range 18 West, described as follows: Commencing at a point on the East and West Quarter line of said Section 36 that is 713.42 feet East of the West Quarter corner of said Section 36, thence East, on said Quarter line, 623.20 feet, thence South 00°56'00" West 259.00 feet, thence North 57°17'49" West 670.97 feet (deeded North 67°19' West 671.00 feet) to the place of beginning.

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Appendix 5 - City Ordinance

ARTICLE IV. GROUNDWATER PROTECTION*

Sec. 38-90. Purpose and intent.

The City of Buchanan has determined that:

- (1) The groundwater underlying the city is the sole source of the city's drinking water.
- (2) Groundwater aquifers are integrally connected with, and flow into, the surface waters, lakes and streams that constitute significant public health, recreational and economic resources of the city.

*Editor's note—Ord. No. 355, adopted Sept. 23, 2002, deleted §§ 38-90—38-93 in their entirety, and enacted similar provisions to read as herein set out. Former §§ 38-90—38-93 derived from Ord. No. 341, adopted Jan. 22, 1996.

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(3) Spills and discharges of petroleum products, sewage and other hazardous substances threaten the quality of the groundwater supplies and other water related resources, posing potential public health and safety hazards and threatening economic losses.

Therefore, the City of Buchanan has enacted this article to:

- (1) Preserve and maintain existing and potential groundwater supplies, aquifers, and groundwater recharge areas of the city, and protect them from adverse development or land use practices.
- (2) Preserve and protect present and potential sources of drinking water supply for public health and safety.
- (3) Conserve the natural resources of the city.
- (4) Protect the financial investment of the city in its drinking water supply system and to meet state requirements for wellhead protection.
- (5) Assure that state regulations that help protect groundwater are implemented consistently when new or expanded development proposals are reviewed.

(Ord. No. 355, 9-23-02)

ec. 38-91. Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Aquifer: A geologic formation, group of formations or part of formation capable of storing and yielding a significant amount of groundwater to wells or springs.

Best management practices: Measures, either managerial or substural, to prevent or reduce pollution inputs to soil, surface water or groundwater.

Development: The carrying out of any construction, reconstruction, alteration of surface or structure or change of land use or intensity of use.

Environmental contamination: The release of a hazardous substance, or the potential release of a discarded hazardous substance, in a quantity which is or may become injurious to the environment, or to the public health, safety or welfare.

Facility: Any building, structure or installation from which there may be a discharge of pollutants.

Hazardous substance: A chemical or other material, which is or may become injurious to the public health, safety or welfare, or to be environment. The term "hazardous substance" includes, but is not limited to, hazardous substances as defined in the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, Public Law 96-510, 94 Stat. 2767; "hazardous waste" as defined in the Hazardous Waste Management Act, Act No. 64 of the Public Acts of 1979, being MCL 299.501 to 299.551; "petroleum" as defined in the Leaking Underground Storage Tank Act, Act No. 478 of the Public Acts of 1988, being MCL 299.831 to 299.850.

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Primary containment facility: A tank, pit, container, pipe, or vessel of first containment of a hazardous substance.

Secondary containment facility: A second tank, catchment pit, pipe, or vessel that limits and contains liquid or chemical leaking or leaching from a primary containment area. Containment systems shall be constructed of materials of sufficient thickness, density and composition to prevent the discharge to land, groundwater, or surface waters, of any pollutant that may emanate from said storage container or containers.

(Ord. No. 355, 9-23-02)

Sec. 38-92. Scope.

- (1) These provisions shall apply to all business and facilities, including private and public facilities, which use, store or generate hazardous substances in quantities greater than 100 kilograms per month (equal to about 25 gallons or 220 pounds), and which require site plan review under the provisions of this article.
- (2) All applications for site plan review shall be required to meet the conditions set forth in this article in addition to those contained in the Zoning Ordinance of the City of Buchanan, including but not limited to section 15.105 et seq. (Ord. No. 355, 9-23-02)

Sec. 38-93. General provisions.

- (1) Groundwater protection standards.
- (a) The development and related improvements shall be designed to protect the natural environment, including lakes, ponds, streams, wetlands, flood plains and groundwater, and to ensure the absence of an impairment, pollution, and/or destruction of water, natural resources, and the public trust therein.
- (b) Stormwater management and drainage facilities shall be designed to retain the natural retention and storage capacity of any wetland, water body, or watercourse, and shall not increase flooding, or the potential for environment contamination, on-site or off-site, and shall not result in loss of the use of property by any third party.
- (c) General purpose floor drains shall be connected to a public sewer system, an on-site holding tank, or a system authorized through a state surface or groundwater discharge permit.
- (d) Sites at which hazardous substances are stored, used, or generated shall be designed to prevent spills and unpermitted discharges to air, surface of the ground, groundwater, lakes, streams, rivers or wetlands.
- (e) State and federal agency requirements for storage, spill prevention, record keeping, emergency response, transport and disposal of hazardous substances and polluting materials shall be met. No discharges to groundwater, including direct and indirect discharges, shall be allowed without applicable permits and approvals.

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- (f) In determining a conformance with the standards in this article, the city shall take into consideration the publication entitled Small Business Guide to Secondary Containment, Clinton River Watershed Council, 1991, and other applicable references.
- (g) Bulk storage of pesticides shall be in accordance with Regulation No. 640, Commercial Pesticide Bulk Storage, of Act 171 of the Public Acts of 1976, as amended, being MCL 286.569.
- (2) Above ground storage and use areas for hazardous substances and polluting material.
- (a) Primary containment of hazardous substances shall be product tight.
- (b) Secondary containment shall be sufficient to store the substance for the maximum anticipated period of time necessary for the recovery of any released substance. Products held in containers of ten gallons or less packaged for retail use shall be exempt from this item.
- (c) Outdoor storage of hazardous substances shall be prohibited except in product-tight containers that are protected from weather, release, accidental damage and vandaliem, including an allowance for the expected accumulation of precipitation.
- (a) Cut buildings, storage rooms, sheds and pole barns which are utilized as secondary containment shall not have floor drains which outlet to soil, public sewer systems, groundwater, or nearby drains or natural water bodies unless a surface or groundwater discharge permit has been obtained pursuant to applicable requirements of Act 451.
- (e) Areas and facilities for loading and unloading of hazardous substances as well as areas where such materials are handled and stored, shall be designed and constructed to prevent unpermitted discharges to floor drains, rivers, lakes, wetland, groundwater, or soils.
- (3) Underground storage tanks.
- (a) Existing and new underground storage tanks shall be registered with the authorized state agency in accordance with applicable requirements of the U.S. Environmental Protection Agency and the Michigan Department of Environmental Quality Storage Tank Division.
- (b) Installation, operation, maintenance, closure, and removal of underground storage tanks shall be in accordance with applicable requirements of the Michigan Department of Environmental Quality Storage Tank Division. Leak detection, corrosion protection, spill prevention and overfill protection requirements shall be met. During operation, records of monthly monitoring or inventory control must be retained and available for review by city officials for five years.
- (c) Underground storage tanks taken out of service permanently shall be emptied and permanently closed in accordance with the requirements of the Michigan Department of Environmental Quality.

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- (4) Well abandonment. Out-of-service water wells shall be sealed and abandoned in accordance with applicable requirements of the Michigan Department of Environmental Quality.
- (5) Groundwater removal. No person shall install a water well on, use any existing well on, or pump or otherwise use any groundwater which has been designated as contaminated by state or federal regulatory agency or any groundwater from beneath the surface of any property located in the City, which has been designated as contaminated by a state or federal regulatory agency unless such activity has been approved by the appropriate state or federal regulatory agency as part of a remediation plan.
 - (6) Site with contaminated soils and/or groundwater.
 - (a) Site plans shall take into consideration the location and extent of any contaminated soils and/or groundwater on the site, and the need to protect public health and the environment.
 - (b) Development shall not be allowed on or near contaminated areas of a site unless information from the Michigan Department of Environmental Quality is available indicating that cleanup will proceed in a timely fashion.
 - (7) Construction standards.
 - (a) The general contractor, or if none, the property owner, shall be responsible for assuring that each contractor or subcontractor evaluates each site before construction is initiated to determine if any site conditions may pose particular problems for handling any hazardous substances. For instance, handling hazardous substances in proximity to water bodies or wetlands may be improper.
 - (b) Hazardous substances stored on the construction site during the construction process shall be stored in a location and manner designed to prevent spills and unpermitted discharges to air, surface of the ground, groundwater, lakes, streams, rivers, or wetlands. Any storage container over 25 gallons, or 220 pounds, containing hazardous substances shall have secondary containment.
 - (c) If the contractor and/or owner will be storing or handling hazardous substances that require a manufacturer's material safety data sheet, the contractor and/or owner shall familiarize him/herself with the sheet, and shall be familiar with procedures required to contain and clean up any release of the hazardous substance.
 - (d) Upon completion of construction, all hazardous substances and containment systems no longer used or not needed in the operation of the facility shall be removed from the construction site by the responsible contractor and/or owner, and shall be disposed of, recycled, or reused in a proper manner as prescribed by applicable state and federal regulations.

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(8) Maintenance. In areas where hazardous substances are handled, structural integrity of the building must be maintained to avoid inadvertent discharge of chemicals to soil and groundwater. Cracks and holes in floors, foundations and walls must be repaired in areas where chemicals are handled or stored.

(Ord. No. 355, 9-23-02)

Sec. 38-94. Site plan review requirements.

- (1) Specify location and size of interior and exterior area(s) and structure(s) to be used for on-site storage, use, locating/unloading, recycling, or disposal of hazardous materials.
- (2) Specify location of all underground and aboveground storage tanks for such uses as fuel storage, waste oil holding tanks, hazardous materials storage, collection of contaminated storm water or wash water, and all similar uses.
- (3) Specify location of exterior drains, dry wells, catch basins, retention/detention areas, sumps and other facilities designed to collect, store or transport storm water or waste water. The point of discharge for all drains and pipes shall be specified on the site plan.
- (4) Specify areas on the site that the applicant has reason to believe are contaminated, together with a report of the status of site cleanup, if applicable.
 - (5) Submit hazardous materials reporting form for site plan review.
- (6) Submit state/county environmental permits checklists. (Ord. No. 355, 9-23-02)

Sec. 38-95. Conditions for approval or denial.

The planning commission, upon reviewing a site plan, shall take one of the following actions:

- (1) Approval. If the site plan meets all the Zoning Ordinance and related development requirements and standards, the planning commission shall record such approval and the chairman shall sign three copies of the site plan, filing one in the official site plan file, forwarding one to the building inspector, and returning one to the applicant.
- (2) Disapproval. If the site plan does not meeting Zoning Ordinance and related development requirements and standards, the planning commission shall record the reasons for denial. The applicant may subsequently refile a corrected site plan under the same procedures followed for the initial submission.
- (3) Conditional approval. Conditions on approval of the site plan may be imposed meeting the requirements specified in the City Zoning Enabling Act. Conditions must be:
 - Designed to protect natural resources and the health, safety and welfare and social and economic well-being of residents, neighbors, and the community as a whole.
 - b Related to the valid exercise of the police power.

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- c. Necessary to meet the purposes of the Zoning Ordinance and related to the standards established in Zoning Ordinance for the land use or activity under consideration.
- (4) Table. If the site plan is found to be in violation of requirements, incomplete with respect to necessary information or presenting a unique situation, the planning commission may table the site until a public hearing can e scheduled to determine specific improvement requirements the planning commission feels are necessary but the applicant is not in agreement with.

(Ord. No. 355, 9-23-02)

Sec. 38-96. Appeals.

The city commission may grant a special permit if it finds by written decision that the proposed use:

- (1) Meets the intent of this section as well as its specific criteria;
- (2) Will not, during construction or thereafter, have an adverse impact on any aquifer or recharge area in the district;
- (3) Will not adversely affect an existing or potential domestic or municipal water supply, and is consistent with existing and probably future development of surrounding areas.

In addition to the findings described above, the decision shall include an explanation of the reason for any variation to the requirement.

(Ord. No. 355, 9-23-02)

Sec. 38-97. Exemptions and waivers.

The transportation of any hazardous substances shall be exempt from the provisions of this ordinance providing the transporting motor vehicle or rail is in continuous transit, or that it is transporting substances to or from a state licensed hazardous waste treatment, storage, or disposal facility.

(Ord. No. 355, 9-23-02)

Sec. 38-98. Penalties and costs.

- (1) Falsifying information. Any person/persons who is/are found to have violated an order of the city or who willfully or negligently fails/fail to comply with any provision of this article and the orders, rules and regulations and permits issued thereunder, shall be fined upon conviction not more than \$500.00, plus costs.
- (2) Violations. Any person/persons which is/are found to have violated an order of the City or who willfully or negligently fails/fail to comply with any provision of this ordinance and the orders, rules and regulations and permits issued thereunder, shall be fined upon conviction not more than \$500.00, plus costs. Each day on which a violation shall occur or continue to occur, shall be deeded a separate and distinct offense. In addition to the penalties provided herein, the city may recover reasonable attorney's fees, court costs, court reporter's fees, and other

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BUCHANAN CODE

expenses of litigation by appropriate suit at law against the person(s) found to have violated this article or the orders, rules, regulations and permits issued thereunder. Any person/persons violating any of the provisions of this article shall be liable to the city for any expense, loss or damage caused by such violation. The city shall bill the person/persons for the costs incurred by the city caused by the violation.

(Ord. No. 355, 9-23-02)

Sec. 38-99. Severability.

If any provision, paragraph, word, section or article of this Ordinance is invalidated by any court of competent jurisdiction, the remaining provisions, paragraphs, words, sections and articles shall not be affected and shall continue in full force and effect. (Ord. No. 355, 9-23-02)

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Appendix 6 – Groundwater Restricted Area Letter

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGIONS 5 77 WEST JACKSON BOULEVARD CHICAGO, IL 60604-3590

September 11, 2006

REPLY TO THE ATTENTION OF:

Margaret Mullendo, City Manager City of Buchanan 302 N. Redbud Trail Buchanan, MI 49107

Re:

Groundwater Use Restrictions

Electro-Voice Superfund Site

Dear Ms. Mullendo:

We are writing this letter to provide the City of Buchanan with an update on the remedial activities at the Electro-Voice, Inc. Superfund Site located in Buchanan, Michigan and to request the City's assistance in ensuring that groundwater use is restricted in the area denoted in Figure 1.

As you know, the former Electro-Voice property located at 600 Cecil Street, Buchanan, MI is part of a National Priority List Superfund Site. This property includes a former dry well area where paint wastes and solvents were disposed, former lagoons where electroplating wastes were disposed, and contaminated groundwater on and off property. U.S. EPA selected a cleanup plan for the lagoons, dry well area soil and on-property groundwater in a 1992 Record of Decision ("ROD"). The construction of the on-property remedies was completed in 1999. The soil remediation included the construction of a hazardous waste cap over the lagoon area to contain soil contaminants, to reduce contaminants migration to the water table and to prevent contact with the contaminated material in the lagoons; and the treatment of dry well area soils by the subsurface volatilization and ventilation system to cleanup levels based on limited industrial use. The Electro-Voice property requires land use restrictions that prohibit interference with the cap, industrial use area and building foundation, prohibit residential use and prohibit groundwater use. The owner has agreed to record a restrictive covenant on the property to implement these land use restrictions. The attached Figure 2 identifies the hazardous waste cap and the restricted industrial use area at the site for your records. Title work did not reveal utility easements over these restricted areas, however please let us know if the City is aware of any utilities that may cross the hazardous waste cap and industrial use restricted areas.

Groundwater contamination extends from the Electro-Voice property to approximately one-half mile north. In 1999, U.S. EPA signed a ROD to address the off-property groundwater contamination. The groundwater remediation is ongoing through monitored natural attenuation to achieve Michigan groundwater standards. The estimated cleanup

time frame for the groundwater is over 50 years. The area shown in Figure 1 is where groundwater use must be restricted and includes the groundwater contamination plume area and a buffer zone. It is our understanding that the City of Buchanan currently prohibits groundwater use in areas designated by state or federal agencies as contaminated under Chapter 38, Article IV, Sections 38-90 to 38-98 of the City Code. Specifically Article IV, Section 38-93(5) states:

"No person shall install a water well on, use any existing well on, or pump or otherwise use any groundwater which has been designated as contaminated by state or federal regulatory agency or any groundwater from beneath the surface of any property located in the City, which has been designated as contaminated by a state or federal regulatory agency unless such activity has been approved by the appropriate state or federal regulatory agency as part of a remediation plan."

The area identified in the map in Figure 1 is considered contaminated by U.S. EPA within the meaning of the City's ordinance. We are requesting that the City of Buchanan impose the groundwater restrictions identified in Article IV. Section 38-90 through 38-98 on the area identified in the map in Figure 1.

We appreciate the assistance of the City in this matter. If you should have any questions or require additional information, please contact Giang-Van Nguyen at (312)886-6726 or via Email at nguyen.giang-van@epa.gov or Janet Carlson at (312)886-6059.

Sincerely,

Giang-Van Nguyen

Remedial Project Manager

Janet R. Carlson

Associate Regional Counsel

cc: Sharon Jaffess, Acting Section Chief, USEPA

Cindy Fairbanks, State Project Manager, MDEQ

Rick Smigielski, City of Buchanan

Gladys Bybee, City of Buchanan

James Susan, Fishbech, Thompson, Carr & Huber, Inc.

Site file

